

**Glossary of Bromeliaceae terms** based on information from many Botanical sources. by Derek Butcher April 2018

If you come across a botanical term that you are not sure of, please contact me. I might not know the answer but can try to find out and add it the list

= : Heterotypic synonym, see below for explanation

≡ : Homotypic synonym, see below for explanation

## A

**a-, an-:** Without.

**a, ab:** away from

**abaxial:** Situated out of, or directed away from, the axis. eg. the underside of a leaf

**aberrant:** Unusual or exceptional; a plant or structure that varies from the type: mostly used with regard to variation.

**abortive:** Defective; barren; not developed.

**about:** circa, circum, circiter, fere, quasi.

**abr-:** Delicate (abrophyllum = delicate-leaved).

**abscissus;** cut off

**acantha:** Referring to a thorn, spines (e.g., *Acanthostachys pitcairnioides*).

**acaulescent:** Stemless, or apparently so (acauline = without a stem).

**accedens:** approaching, resembling

**acclimatization:** A process by which an organism attains tolerance to a changed environment.

**-aceae:** Added to stem of name or synonym of type genus to form name of family.

**acerose:** Pointed or shaped like a needle.

**-aceus:** Resembling; having the nature of; belonging to. Used to form adjectives from nouns.

**accretus:** grown together

**achyrostachys:** Chaff-like spike.

**acicular:** Needle-shaped; like a needle or bristle as some leaves; having sharp points like needles.

**aciculatus:** marked with very fine irregular streaks

**acidophile:** an organism adapted for life under very acid growing conditions

**acranthus:** with flowers

**actino-:** Star-like; radiating from the center; rayed (actinophylla = rayed leaves).

**actinomorphic:** Regular flowers. When individual flower parts are bisected vertically in two or more planes and have similar halves. Not to be used to describe sepals or petals

**active transport:** the controlled movement of substances across biological membranes against an osmotic gradient, a process requiring metabolic energy supplied by the cell involved.

**aculeate:** Prickly; sharp-pointed.

**acuminata, acuminate:** Tapering into a long narrow point

**acute:** Ending in a sharp point with sides nearly straight (acutissima = very pointed;

**acutangulatus** = acute angle; acutifidus = acutely cut; acutifolius = sharp leaf)

**ad-:** To; on; onto (adnatum = joined to).

**adaxial:** Adjacent to, or turned towards, the axis. eg. the upper side of the leaf

**aden-:** gland

**adenosine triphosphate (ATP):** an organic molecule containing high energy phosphate bonds, the major source of usable energy in metabolism.

**adherent:** Attached or joined, although normally separate.

**adhesion:** the attraction of matter to another matter, as water molecules to cellulose fibrils

**adjacent:** See erect

**adjoining:** contiguous, confinis

**adnate:** Joined, united with another part, as stamens with the corolla tube or an anther in its whole length with the filaments.

**adpressus:** Pressed against; lying flat against.

**adpersus:** asperses; scattered

**adscendens:** Ascending.

**aduncatus:** aduncus, hooked

**adustus:** blackened, scorched

**adventitious:** Produced out of unusual or abnormal places, such as some roots or buds, or from stems or leaves. See also pseudoviviparous and viviparous.

**adventive:** Said of an introduced plant not yet established: imperfectly or only partially naturalized.

**adversum:** opposite to, against, before

**aemulans :** rivalling, more or less equalling

**aeneus:** bronze, brazen

**aequi-, equi-, aequalis:** equal.

**aequatorialis, aequatorius:** Equatorial.

**aer-:** Referring to the air (aeranthos = flowers of the air).

**aerial roots:** Roots produced above or out of the growing medium.

**aesitivation:** The arrangement of floral parts in the bud.

**affina:** Related to another species; often used in the sense of being doubtful or ambiguous; shortened as aff.

**after-ripening:** the metabolic changes some seeds must undergo following dispersal before they can germinate.

**agamosperry:** for the process by which some plants produce viable seeds without fertilization and whose progeny is, therefore, usually genetically uniform and identical to the parent

**ageotropism:** the absence of any tendency of an organ e.g. root, to grow in a particular direction relative to the force of gravity

**agglomerate:** Gathered together in a cluster or mass; collected into a mass but not coherent.

**agglutinate:** Adhered in a mass by some sticky or viscous substance.

**aggregated:** Clustered in a dense mass; adhering as if glued together (aggregatus).

**agrarius:** pertaining to land

**alaris :** axillary

**alate:** Winged or wing-like. An outgrowth of tissue around a structure.

**alba, albida:** White; pale (albiflora = having white flowers).

**albino bromeliads:** Plants with floral bracts and flowers that are white, although

normally they would be colored. Albino seedlings are those that are pure white and do not survive.

**albo-marginate:** a form of variegation where the edge of the leaf is white

**aliquam:** somehow, to some extent

**aliquoversum:** one way or another

**-alis:** Belonging or pertaining to.

**aliter:** otherwise, in another manner

**alius, alia, aliud:** another, other (of several)

**allantoideus:** sausage shaped

**allele:** one of the two or more alternative forms of a gene that occupy the same position (locus) on homologous chromosomes

**allelopathic:** producing substances which adversely affect nearby organisms

**alliaceus:** like garlic or onion

**allochrous:** changing from one colour to another

**allopatricus:** allopatric, not growing in the same area or region as a related plant

**allopolyploid:** a cell, tissue or organism whose nuclei bear three or more sets of chromosomes from two or more species or from very divergent populations within a single species

**alpestris:** Growing in mountains; alpine.

**alta:** Referring to height (altus, altissimus = very tall).

**alter:** other (of two), second

**altern:** Alternate; any arrangement of parts not opposite or whorled; placed singly at different heights on the axis or stem (alternifolia).

**alutaceus:** leather coloured, pale brown

**alveiformis:** trough-shaped

**alveola:** cavity, pore, alveole

**amabilis:** Lovely.

**ambiens:** going around, surrounding

**ambly-:** blunt, obtuse

**ambo:** both together, the two

**ambuscus:** burned

**amethyst:** Violet-colored (amethysticus).

**ammo-:** sand- . ammobius means dwelling on sand

**amoena:** Beautiful; charming; pleasing.

**amorphous:** Having no definite form; formless.

**amphi-:** around, double, on both sides, of two kinds

**ampla:** ample; abundant; large; great.

**amplexicaul:** Clasping or embracing a stem, as a leaf.

**ampliate:** Enlarged.

**amplitude:** The gradient of tolerance shown by a species to a single factor or aggregation of factors, such as light, soil, water or temperature.

**ampullacea:** Flask- or bottle-shaped.

**an-:** Lacking, without.

**ana-:** Upwards; back again; with general sense of increasing.

**analogous:** Related in use and function, but not in origin.

**ananase:** An anti-inflammatory enzyme derived from pineapples with special medicinal

usages.

**anaphase:** a stage in mitosis in which the separated daughter chromosomes are moved to opposite ends of a mother cell.

**anatropous:** Having the ovule inverted at an early period of its development.

**anceps:** two-edged.

**anciptous:** Two-headed; two-edged, as certain flattened stems.

**andro-:** male

**androgynous:** having male and female flowers in the same inflorescence

**andromonoecious:** a plant having both bisexual flowers and solely male flowers, as in *Cryptanthus* subgenus *Cryptanthus*

**anemophilous plant:** a plant whose pollen is dispersed by wind currents.

**aneuploid:** a cell, tissue or organism whose nuclei contain partial as well as complete sets of chromosomes

**angiosperm:** A plant with seeds enclosed in an ovary, such as a bromeliad.

**angust:** Narrow (angustus, angustifolia narrow-leaved, having narrow leaves).

**annular:** In the form of a ring.

**anomalous:** Deviating from the type; abnormal.

**anterior:** Incorrectly used for sepals - Front; on the front side; away from the axis. should be abaxial although this is inapplicable in long/or twisted pedicels

**anther:** The pollen-bearing part of a flower; the top of the stamen that sheds pollen

**anthesis:** The flowering period; the time when the flower is fully open, usually the time of anther maturity when the pollen is ripe.

**anthocarpus:** Said of a body combined of flowers and fruit united into a solid mass, as in a pineapple.

**anthocyanins:** the pigments dissolved in the vacuoles of some plant cells which are responsible for the blue to red color of petals, leaves, fruits, etc.

**antiacantha:** Against the spine or prickle.

**antical:** Front; anterior.

**anticodon:** a nucleotide triplet occurring on a transfer-RNA molecule which recognizes a specific codon on the messenger-RNA molecule during protein synthesis.

**antipetalous** opposite the petal – sometimes the filament is joined for some length to the petal

**antipodal cells:** the cells located at the end of the embryo sac (female haplophase) opposite the micropyle

**antisepalous** opposite the sepal or in other words next to the antisealous filament.

**antorse:** Directed upward or forward. usually referring to spines

**-anus:** Belonging or pertaining to.

**aperiens:** aperture, opening

**apex:** The tip of an organ; e.g., the tip of a leaf.

**apical:** At the apex or top or growing tip.

**apical dominance:** the enforcement, by the apical region of a stem, of dormancy in some or all of the buds located below.

**apical meristem:** a group of meristematic (embryonic) cells located at the growing tip of a stem or root

**apiculate:** Terminating abruptly in a little point that is not particularly stiff.

**apiculus:** A small apical point or tip.

**apo-**: From; away; out of; free.  
**apomixis**: seed without sex – seeds inherit only genes from mother  
**apoplast**: that part of the plant body, largely comprised of cell walls, which is freely accessible to substances in aqueous solutions  
**appendage**: An attached subsidiary or secondary part. as in petal appendages  
**appendic-**: Referring to an appendage (appendiculatus).  
**applanate**: Flattened or horizontally expanded.  
**applicitus**: lying upon, lying close to  
**appositus**: placed against, side by side with  
**appressed**: Closely and flatly pressed against; adpressed.  
**approximate**: Close together but not united.  
**apud**: near, with, in the writings of.  
**aqu-**: Referring to water.  
**aquiferous**: Water-bearing.  
**aquilega-**: Resembling an eagle; aquiline.  
**arachnoid**: Cobwebby with soft and slender entangled hairs; spider-like.  
**araneosa**: Resembling a spider web.  
**arcuate**: Bent or curved in the form of a bow.  
**arena**: Referring to sand (arenicolous = dwelling in sandy places).  
**areole**: A small, more or less angular space on a surface, as between the veins of leaves.  
**arescens**: becoming dry  
**argenta**: Silvery.  
**argute**: sharply  
**aril**: appendage of certain seeds  
**aristate**: With an awn or stiff bristle usually at the apex.  
**-arius**: Possession or pertaining to.  
**armate**: Armed; with a defensive structure as a sharp point, thorn, spine, or barb.  
**armeniacus**: apricot coloured  
**arom-**: Referring to odor (aromatica).  
**arrect-**: Erect (arrectus).  
**arrhizus**: rootless  
**articul-**: Joined, articulate (articulatus).  
**-arum**: meaning 'of'  
**arund-**: Referring to a reed, reed-like (arundinaceus).  
**arvensis**: Pertaining to cultivated fields.  
**ascending**: Rising up; produced somewhat obliquely or indirectly upward.  
**-ascens**: Indicating a process of becoming but also a lack of full attainment.  
**asepalous**: Having no sepals.  
**aseptic culture**: the cultivation of cells, tissues or whole organisms in a medium free of such other life forms as contaminating fungi or bacteria.  
**asexual**: Sexless; without sex, such as in vegetative propagation.  
**asper**: asperatus, rough with points or short stiff hairs  
**assurgens**: rising upwards  
**-aster, -astrum**: incomplete likeness or inferiority  
**asymmetrical**: Not symmetrical; having no regular shape.  
**-atilis**: Indicating place of growth.

**atmospheric:** a name coined by Carl Mez to describe the xeric tillandsioids which have neither absorbing roots nor tank impoundments. These plants must secure moisture and nutrients directly from rainfall and canopy fluids by way of their absorbing foliar trichomes.

**atque:** and

**atra-:** Dark (atratus = black; atropurpurea = deep purple; atrorubens = dark red; **atroviridipetala** = dark green petals).

**attenuate:** Narrowing to a point; thin or slender

**-atus:** Possession or likeness.

**atypicus:** not typical, abnormal

**Auct, Auctor:** author, writer, defender of a thesis (not necessarily its actual author) in a public disputation. Therefore vague!

**auctus:** enlarged, increased

**augusta:** Majestic; notable; august.

**aurantiacum:** Orange-colored.

**aure-:** Golden (aureus, aurespina = golden-spined; aureobrunnea = golden brown).

**auri-:** Referring to an ear-shape.

**auricle:** An ear-shaped part or appendage, as the projection at the base of some leaves and petals.

**australis:** south, southern

**aut:** or

**autem:** on the other hand, but

**autogamous:** Plants that routinely self-pollinate.

**autoicus:** having male and female organs in separate inflorescences on the same plant

**autoployploid:** a cell, tissue or organism whose nuclei contain three or more sets of chromosomes derived from very similar populations within a single species.

**autotroph:** an organism capable of synthesizing all of the biological compounds it needs from simple inorganic substances.

**auxin:** A chemical substance produced in the growing tips of stems, roots, and in young parts generally, helping to regulate or modify the growth of these parts.

**avellaneus:** hazel, nut-brown

**avenis:** avenius, veinless, opposite to venosus

**awl-shaped:** Tapering gradually upward from a broad base to a sharp point; narrowly triangular.

**awn:** A bristle-like part or appendage.

**axil:** The juncture of leaf and stem; the upper angle that a petiole or peduncle makes with the stem that bears it.

**axile:** Borne in or on the axis or relating to it.

**axillary:** Within or from an axil.

**axis:** The main or central line of development of any plant or organ; the main stem.

**azur-:** Referring to the color blue (azureum).

## **B**

**baccate:** Berry-like; pulpy or fleshy, as in the fruit of an aechmea or a billbergia.

**backcross:** Cross-fertilization of a hybrid with one of its parents.

**badius:** bay, reddish brown, dull brown, chocolate brown

**balteiformis:** belt shaped

**bambusoides:** Bamboo-like.

**banded:** Marked with cross-bars or horizontal lines of a contrasting color. or with very prominent ribs or other structures.

**barb:** A short point or thorn: used to designate points with reflexed or hook-like appendages.

**barbellate:** Having short, stiff, hooked bristles or hairs.

**basal:** Of, at, or forming the base.

**basifixed:** Attached by the base, as an ovule that is affixed at its support by its bottom rather than by its side or by an angle.

**basionym:** A previously published legitimate name-bringing or epithet-bringing synonym from which a new name is formed for a taxon of different rank or position

**basiramifer:** branched from the base

**berry:** A pulpy or fleshy indehiscent fruit with two or more seeds. One of the indicators of *Bromelioideae*

**betinus:** beetroot-purple

**bi-, bis-:** Two or twice.

**bialate:** Twice-winged.

**bicarinate:** Having two keels or ridges

**bicaudate:** Having two tail-like appendages.

**bicolor:** Two-colored, usually referring to leaves where the upperside is a contrasting color to the underside.

**bifarious:** Arranged in two rows - distichous.

**bifid:** Two-cleft or two-cut; forked.

**biflora:** Two-flowered.

**bifurcate:** Twice-forked.

**bigeneric cross:** The crossing of two different genera to form a hybrid genus (e.g., *Neoregelia x Aechmea = xNeomea*).

**binary:** Of two units or components.

**binomial:** Scientific name of organisms consisting of a genus name and a species name in Latin, with the genus name capitalized and the species name in lower case. The scientific names are italicised or underlined.

**biodiversity:** Including all genera, species, ecosystems and the ecological processes of which they are a part.

**biogeography:** Study of the distribution of different groups of organisms (geobotany = plant geography).

**biomass:** Total number of living organisms per unit area at a given time.

**biota:** The animal and plant life of a region; flora and fauna collectively.

**bipartite:** Divided into two parts; separated nearly to the base.

**bipinnate:** wrongly Twice-pinnate; a once-compound inflorescence in which the flowers are borne on secondary spikes rather than on the simple extension of the scape. **should be called** Panicle with side-branches of the first order or once branched

**biserrate:** Doubly serrate: the serratures themselves are serrate.

**bisexual:** Flowers with both male and female parts.

**bistre:** warm brown colour, sepiaceous

**bituminosa:** Sticky.

**bivittatus:** Doubly striped lengthwise.

**blade:** The expanded part of a leaf or floral segment.

**bland:** Pleasant appearing; charming; tempting.

**blephari-:** marginally fringed with hairs, ciliated

**bloom:** See glaucous, pruinose also means flower!

**blushing:** Usually refers to the reddening of the centers of bromeliads as they approach blooming period.

**bolting:** rapid stem elongation which lifts the upper portion of an inflorescence above the vegetative part of the plant prior to anthesis.

**bombycinus:** silky

**borate:** Strap-shaped.

**borealis:** north, northern

**botanical drawing :** Often used in conjunction with a protologue to further define the attributes of the species. See fig1 & 1a

**botry-.** –**botrys:** bunch, raceme

**bottom heat:** A term used to designate the condition that arises when the roots of plants, or the soil in which they grow, are exposed to a higher temperature than that of the air in which the aerial parts are growing

**botuliformis:** sausage-shaped

**brachialis:** arm-long ie 2 ft (65 cm) long

**brachy-:** Short or squat (brachycaulos = short stemmed; brachyphylla = with short leaves).

**bract-:** A modified leaf, often a flower-like structure associated with the true flowers

**bractial:** Relating or pertaining to bracts.

**bracteiform:** Having the form of a bract.

**bracteole:** A small bract; an accessory bract.

**bracteosus:** With numerous or conspicuous bracts.

**bractlet:** Bract borne on a secondary axis, as on the pedicel.

**branch:** Axis or stem of a compound inflorescence whose flowers have pedicels.

**breaking:** Said when buds start to grow.

**breeder:** the person or organisation developing new or improved groups of plants by selection, hybridization, and similar methods

**brevi-:** Short (brevicollis = short-necked; brevifolia = short-leaved).

**bristly:** bearing stiff short hairs or bristles

***Brocchinioideae*** One of the 8 subfamilies of the Bromeliaceae. Type *Brocchinia*

**bromelain:** An enzyme, extracted from the root of a pineapple, which has the property of digesting protein.

**bromelicolous:** Refers to animals that live within Bromeliads.

**bromeligenic:** Refers to an animal that is entirely dependent on its habitat in Bromeliads to complete its reproductive cycle and development.

**bromeliifolia;** With leaves like those of the genus .

***Bromeliaceae:*** The family name of the bromeliad. Split into 8 sub-families *Brocchinioideae, Bromelioideae, Hechtioideae, Lindmanioideae, Navioideae, Pitcairnioideae, Puyoideae, Tillandsioideae*

***Bromelioideae:*** One of the 8 subfamilies of the *Bromeliaceae*. The fruits are baccate.

**brunneus:** Brown; russet.

**brush:** A thicket, floristically of great diversity, but with no single species being dominant.

**bryoides:** Moss-like

**bubalinus:** buff

**bud:** An incipient or nascent shoot; the rudimentary or beginning stalk of a shoot, flower, or leaf before expanding.

**bulbiformis:** Shaped like a bulb.

**bulbosa:** Like a bulb.

**bulbous:** Bulb-like: with the structure or characteristics of a bulb EG. *Tillandsia plumosa*.

**butyraceus:** buttery, butter-like

## C

**C<sub>3</sub> plant:** A plant that incorporates carbon dioxide into an organic compound with three carbon atoms and is then further modified into sugars and other compounds during photosynthesis; the common method for green plants.

**C<sub>4</sub> plant:** A plant that incorporates carbon dioxide into an organic compound with four carbon atoms; only found in a number of tropical plants.

**cacaobrunneus:** chocolate-brown

**cacticola:** Growing on a cactus.

**caducus:** falling, dropping off early

**caes-:** Referring to the color blue ( caerulea = pale indigo blue or dark blue; caerulescens = having a tendency to be blue, almost dark blue; caesia = blue or bluish gray)

**caesariatus:** covered with hair, long haired

**caespitose:** Referring to stems growing in tufts or rather close clusters forming a turf or a mat

**calcareus:** chalky, limy

**calcariform:** Spur-shaped; formed like a spur

**caldarium:** heated greenhouse

**calendulinus:** marigold orange

**calidus:** warm, hot

**callosity:** A thickened or hardened part or protuberance.

**callus tissue:** a soft mass of proliferating, undifferentiated cells which forms as part of the wound-healing response under natural conditions and can be generated from certain types of excised tissues in appropriate sterile culture.

**calo-:** Beautiful.

**Calvin-Benson (C<sub>3</sub>) pathway:** the carbon fixation pathway common to all green higher plants.

**calocephala:** With a beautiful head.

**calycine:** Pertaining to a calyx; calyx-like.

**calyculata:** With whorls of bracts below the calyx; fruit enclosed in a calyx.

**calyx:** The outermost whorl (sepals) of a flower .

**CAM:** Acronym for crassulacean acid metabolism. A modification of the assimilation process primarily found in succulent plants and some bromeliads. Carbon dioxide (CO<sub>2</sub>)

is taken up by the plant during the night hours and stored in the form of organic acids. During the day time the stomata are closed and the stored acids are broken down, with the resultant CO<sub>2</sub> assimilated by the normal C<sub>3</sub> pathway.

**cambium:** A soft formative tissue that gives rise to new tissues (wood, bark, etc.) in the stems of plants. In woody plants it is between the wood and bark, its function being to increase the size of the stem.

**campestris:** Of fields or flat areas, as opposed to hills

**campo-, campso-, campto-, campylo-:** bent

**campus:** flat area, plain

**canal- :** Referring to lines, grooves (canaliculate = grooved or channeled lengthwise)

**canarinus:** canary yellow

**candida:** White; white-hairy; shining lustrous white; pure.

**canescent, canus:** Greyish and inconspicuously covered by short fine hair.

**canopy:** The collective continuous or discontinuous cover provided by foliage

**canopy leachate:** precipitation moving through the forest canopy after it has leached solutes from plant surfaces.

**caperatus:** wrinkled

**capiens:** containing

**capill-:** Referring to a hair or thread (capillarius, capillare, capilliformis = formed like a hair; ).

**capillary:** Hair-like, very slender

**capillary movement:** the flow of water over a hydrophilic surface due to weak chemical attraction between the water molecules and those of the surface (adhesion), as well as between the water molecules themselves (cohesion).

**capillus:** hair's width, 0.18 mm

**capit-:** Referring to the head (usually to the flower cluster).

**capitata:** Formed like a head; aggregated into a very dense or compact cluster.

**capitate:** Forming a rounded head.

**capitiform:** Having the form of a head.

**capitulum:** Head; a close body of sessile flowers.

**capsular:** Pertaining to a capsule; formed like a capsule.

**capsule:** Mature dry fruit that eventually opens to shed the seeds; the "seed-pod"

**capucinus:** nasturtium red

**caput:** head

**carboxylating enzyme:** an enzyme which mediates the chemical union of CO<sub>2</sub> with organic receptor molecules, as in carbon fixation reactions associated with photosynthesis.

**carcharodon:** With shark-like teeth.

**cardinalis:** Superior; pre-eminent; scarlet

**carens:** lacking

**carin-:** Referring to a keel (carinata, carinate = keeled, like a lobster claw, having a single central ridge)

**carina:** A keel-like part or ridge to be found on the surface of a leaf or floral segment;

**carn-:** Referring to flesh (carneous = of a fleshy texture; carnosus = fleshy, pulpy).

**carnivorous plant:** A plant with adaptations primarily designed to capture animals, and thereby acquire substantial portions of its needed nutrients. eg. possibly *Brocchinia reducta*

**carotenoids:** yellow to orange pigments located in some plant cells

**carpel:** The cell of a simple fruit or pistil. Bromeliad fruits contain three carpels

**-carpus:** fruit

**carrier proteins:** proteins thought to be involved in the active transport of certain solutes across biological membranes.

**carrying capacity (K):** the maximum population size or biomass a particular ecosystem can support over a prolonged period of time.

**cartilaginous:** Hard and tough, like parchment; gristle-like.

**carton:** the structural material created by certain ants to build nests.

**castaneous:** Reddish brown; chestnut-colored; often applied to the leaf sheath.

**cataphyll:** An undeveloped leaf; a rudimentary leaf form as at the beginning of a growth. eg bracts on a stolon

**category:** A level to which a taxonomic group may be assigned. These levels in descending order are Division, Class, Order, Family, Tribe, Genus, Section, Series, Species, Variety, Form, and their respective sub-units where applicable.

**caud-:** Referring to a tail.

**caudal:** A slender tail-like appendage.

**caudata:** Furnished with a tail or tails.

**caudex:** The woody base, stem, or trunk of an otherwise herbaceous perennial.

**caul-:** Referring to a stem (cauliflorous = bearing flowers on the stem; caulescens = having a stem or stems).

**-caul:** Referring to a stem (albicaulis = white-stemmed).

**caulescent:** Having an evident leafy stem above the ground.

**cauline:** Belonging to the stem; borne on a stem

**cayenne:** a commercially valuable "variety" of *Ananas comosus*

**celatus:** hidden, concealed

**celeriter:** quickly

**cell determination:** the little understood process whereby a young cell is programmed to become a specific mature cell type during its growth and differentiation

**cell plate:** the incipient cell wall as it forms between daughter nuclei during cytokinesis.

**cellular:** Refers to tissue made up of short, thin-walled cells; composed of cells.

**cellulose:** a polymer composed of chemically linked glucose units - a major constituent of plant cell walls

**centromere:** the region along a chromosome where the spindle apparatus is attached.

**-cephalus:** Head or headed

**cera, ceraceus:** waxy, like bees wax, wax-gold

**-ceras:** -horn, horn-like projection

**cerasinus:** cherry red

**cernuus:** slightly drooping

**cespitose:** Matted; growing in tufts; in little dense clumps.

**cf.** short for confer or compare with (similar to aff.)

**chaet-:** Referring to a hair or bristle (chaetophylla = bristle-like leaves).

**chaeta:** A bristle; seta

**chalaza:** the point of an ovule or seed where the integuments are united to the nucleus

**chalybeus:** steel-grey

**chamaephyte;** a low growing perennial plant whose dormant over-wintering buds are borne at or just above the surface of the ground – e.g. *Deuterocohnia*

**channeled:** Deeply grooved lengthwise.

**character:** a measurable aspect of an organism which exists in at least two expressions (character states) – e.g., petal color is a character, blue and white pigmentations are character states.

**chartaceous:** Thin, hard, and stiff; having the texture of writing paper.

**chasmogamous:** opposite to cleistogamous. Where the stamens are enclosed but the petal blades open so wide that the stamens are exposed

**chilling injury:** cell damage, probably related to changes in membrane permeability, resulting from the exposure of non-cold-hardy- plants to temperatures close to, but not below, freezing.

**-chilus:** -lipped

**chimera:** A mixture of tissues of different genetic constitution in the same part of the plant often resulting in variegation of a part or of the whole plant.

**chiropterophily:** Pollination by bats eg *Werauhia*

**chlamys:** cloak, mantle, covering

**chlor-:** Referring to the color green (chloranthus = green-flowered; chlorophyll = green pigment in plant necessary for the manufacture of its food; chlorophylls = green leaves; chlorosticta = green-spotted).

**chlorophylls:** the green pigments (chlorophyll *a* and *b* in vascular plants) involved in the capture of light during photosynthesis

**chloroplast:** A minute flattened granule containing chlorophyll, developed only in cells exposed to light. Chloroplasts are the center of photosynthesis and starch formation.

**chlorotic:** Abnormally yellowed because of a breaking down of the chlorophyll

**chondroideus:** chondroid, hard and tough like cartilage, the hyphae of the thallus forming a solid mass

**chromatids:** daughter chromosomes still attached at the region of the centromere.

**chromatin:** the nucleic acid-protein complex making up the chromosomes.

**chromosome:** any of several threadlike, rodlike, or beadlike bodies which contain the chromatin during the meiotic and the mitotic processes

**chromosome number:** the characteristic number of chromosomes for each biological species. In sex cells this number is haploid; in fertilized eggs it is diploid, one half ( plus a little) coming from the egg, one half from the sperm

**-chrous:** -coloured

**chrys-:** Golden or golden yellow (chrysantha = golden-flowered).

**ciliate:** With very minute hairs along the margins.

**ciner:** Referring to ashes; ash-gray in color.

**cinereous:** Light gray; ash-colored

**cingens:** surrounding, encircling, girdling

**cinnabarinus:** vermilion

**ciophile:** Needing little light but high humidity

**circa,circiter, circum:** around, in the neighbourhood, near, about

**circin-:** Coiled (circinnatus = coiled inward, referring to the leaves; rolled up on the axis with the apex at the center of the coil).

**circinate:** Coiled downward or inward from the top

**circumnexus:** wrapped around, surrounding

**citr-:** Referring to citrus (citrina = lemon-colored).

**clade:** a taxonomic group of organisms classified together on the basis of homologous features traced to a common ancestor.

**clav-:** Referring to a club (clavatus).

**clavate:** Club-shaped; said of a long body thickened toward the top.

**claw:** The long, narrow petiole-like base of the petals or sepals in some flowers.

**cleistogamy:** Production of flowers that do not open to expose reproductive organs, thus preventing cross-pollination. Occurs in some species of *Tillandsia* subgenus

*Diaphoranthema*

**climax stage:** the final stage in the process of ecological succession. It is usually more persistent than younger stages.

**clonal:** Of, or pertaining to, a clone.

**clone:** two or more individuals, originally derived from one plant by asexual propagation, which remain genetically identical.

**Clonotype:** Not officially accepted in the ICBN but used to denote "a specimen taken from a vegetatively propagated part of the individual plant from which the type specimen was obtained, as defined in. Fernald, H.T. 1939. On type nomenclature. Annals of the Entomological Society of America 32(4).689-702, p. 693.

**cm:** Centimeter. Measure of length equal to 0.3937 inches (2.54 cm = 1 inch)

**coactus:** felted

**coalescence:** A union of similar parts or organs or of those in the same series, as stamens with stamens and petals with petals.

**coarctate:** Crowded together; compressed.

**coccinea:** Scarlet.

**cochlear:** Spoon-shaped.

**cochleatus:** coiled like snail's shell

**codon:** a 3-nucleotide sequence on a m-RNA molecule

**coelest-:** Referring to the sky; blue (coelestis = sky blue; coerulea = dark blue).

**coherent:** Two or more similar parts or organs joined.

**cohesion:** the holding together or attraction of parts of the same substance, as H<sub>2</sub>O molecules in liquid water.

**-cola:** -dweller,

**collateral:** By the side; standing side by side

**collinus:** pertaining to hills, **Collis:** hill

**colony:** A group of individuals, usually of one species, living in close community .

**colour (or color):** Had very little meaning to taxonomy when all descriptions were based on herbarium specimens. These days more reliance is made on colour but there is no world-wide standard approach. W T Stearn's Botanical Latin goes to great lengths advising the historical approach to colours. See Fig 2. We have taken the opportunity of showing what could be adopted for Bromeliaceae from the book Exotica. See Fig 3

**coma:** Referring to a hair (comata or comose = bearing a tuft or tufts of hair; comosus = bearing a tuft of hair or leaves; coma = tuft of hair, particularly on a seed)

**commensalistic relationship:** a relationship between two different kinds of organisms in which one participant (the commensal) benefit from the association while the other (the host) is neither helped nor harmed by it

**commixtus:** mixed together

**communis:** General; growing together in company; gregarious.

**community:** all the organisms occurring in a common habitat

**community pot:** A pot containing small seedlings that have been transplanted from the original growing medium.

**compactus:** Compact; dense.

**companion cell:** a small parenchyma cell intimately associated with a sieve tube element and probably aiding the latter in its food-transporting function

**compatibility genes:** genes present in self-incompatible plants which influence the ability of a pollen grain to fertilize the ovules in a particular pistil.

**complanata:** Flattened out in one plane, referring to the inflorescence.

**complanate:** Flattened; level

**complectens:** embracing, clasping

**complete:** Designates a flower that has sepals, petals, stamens and pistils.

**complicate:** Folded over or back on itself.

**compound:** Having two or more similar parts in one organ. A compound inflorescence is a branching inflorescence.

**compressed:** Flattened, especially flattened laterally.

**con-:** With or having (concolor = of one color throughout, uniformity of hue in sepals and petals; concentrica = with intensification of color in the center; concolorous = of the same color throughout).

**concentration gradient:** the change in concentration of a substance in a solvent per unit of distance

**Conculta:** group of cultivars

**conduplicatus:** folded together lengthwise

**conferta-:** Crowded (confertiflora = crowded flowers)

**confinis:** bordering on, adjoining

**confluent:** Blending into one; running together.

**confusa:** Confused; uncertain (as to characteristics).

**congeneric:** Belonging to the same genus.

**conglomerate:** Clustered; brought together; forming a sphere.

**conglutinated:** United firmly together; glued together.

**congruent:** Corresponding with.

**connate:** United or joined; in particular, like or similar structures joined as one body or organ as in sepals

**connivens:** coming in contact, converging

**conoideus:** almost conical

**conspecifics:** members of the same species.

**conspectus:** A sketch or outline of a subject; a general survey

**conspersus:** sprinkled

**consumers:** those organisms in an ecosystem which gain nutrients by eating other organisms

**contiguous:** In actual contact; touching.

**contorted:** Twisted.

**convergent evolution:** the independent evolution of similar adaptations among forms of life which are only distantly related

**convex:** Having a rounded surface, often one that is bulging and curved.

**convolute:** Rolled around, as a leaf in bud with one edge inside and the other outside; coiled.

**contracted:** Refers to an inflorescence that is narrow and dense with short or appressed branches.

**cool house:** A greenhouse with a maximum night temperature of 50-60° F .

**copper:** a metal necessary for plant growth but can be fatal in excess such as copper treated timber when used in a shadehouse especially as cross beams

**corallina:** Coral color.

**cordate:** Heart -shaped.

**cori-:** Referring to leather (coriacea or coriaceous = leathery in texture, thick and tough).

**corolla:** The inner circle of floral parts composed of petals.

**cortex:** the tissue region between the epidermis of a stem or root and the internal central vascular tissues (the stele).

**corymb:** A broad, more or less flat-topped flower cluster – as in *Neoregelia/Canistrum* etc (corymbiform = having the form of a short, broad, flat-topped indeterminate flower cluster; corymbosa = having a corymb or a flat-topped flower cluster).

**cotyledon:** a seed leaf. Bromeliads produce a single cotyledon which absorbs food from the endosperm within the seed.

**crassulacean acid metabolism:** (CAM) a process common to many xerophytes, including some *Tillandsia*, involving the night-time accumulation of atmospheric CO<sub>2</sub> to make malic acid.

**crateriform:** Cup-shaped; like a deep saucer.

**cren-:** Scalloped (crenate = shallowly round-toothed or obtusely toothed, having the margin cut into rounded scallops).

**crested:** Bearing a tuft; having a terminal of proliferating cells producing a grotesque shape.

**cretaceous:** Chalky.

**crispa-:** Curled; crinkled; finely waved along the margin ( crispate = a leaf margin when very irregular, curled, and twisted);

**cristate (a):** Forming a crest – As Bromeliads are monocotyledons this occurs from the base of the plant. Sometimes seen in *Tillandsia ionantha* etc See also Fasciation

**critical day length:** the threshold day length required to induce a photoperiodic response such as flowering.

**critical night length:** the threshold period of darkness required to induce a photoperiodic response.

**crocata:** Saffron-colored.

**cross:** To transfer pollen from a flower of one plant to pollinate a flower of a different plant: the progeny resulting from such pollinations are known as crosses.

**crossing over:** the exchange of genetic material among adjacent chromatids during meiosis, resulting in gene rearrangements among participating chromosomes.

**cruenta:** Blood-stained; the color of blood; or with blood-colored spots.

**crypt-, crypto-:** Hidden; covered; concealed.

**cucullate:** Hooded; having the margins curved inward to resemble a hood.

**cultigen:** see cultivated plant

**cultivar:** Produced in cultivation as opposed to one growing in habitat; – an assemblage of plants that has been selected for a particular attribute or combination of attributes and that is clearly distinct, uniform, and stable in these characteristics and that when propagated by appropriate means retains those characteristics.

**Cultivar type:** the so-called "type" specimen of a horticultural cultivar. Some such specimens have been called clonotypes by researchers, but which is not to be confused with its other use to cover offsets of holotypes. Because so many cultivars are chosen on colour we, in Bromeliaceae prefer to use coloured photographs called 'Standard' held on the BCR

**cultivated plant:** deliberately selected plants that may have arisen by intentional or accidental hybridization in cultivation, by selection from existing cultivated stocks, or from variants within wild populations that are maintained as recognisable entities solely by continued propagation. These are sometimes referred to as cultigens

**cultivation:** The growing of a plant away from its natural habitat.

**culton (pl. culta):** a systematic group of plants which is based upon one or more user criteria; a word equivalent to taxon but used in the context of different classification philosophy that for taxa in general: names of culta are solely governed by the ICNCP

**cultrate:** In the shape of a knife blade.

**cum:** with, along with

**cupreus, cuprinus:** coppery

**cupular:** Cup-like or cup-shaped.

**cuspid:** A pointed end.

**cuspidate:** Tipped with a sharp, rigid point.

**cuticle:** The outermost layer of the cells of the epidermis.

**cyanea:** Bright blue; azure.

**cyath-:** Referring to a cup (cyathiforme = cup-shaped).

**cyclophysic cultivar:** a clone with the same genotype of the original parent plant but differing in its phenotype, being originally propagated from specific tissue from a phase in the plant's life cycle ( ICNCP Art. 2.7)

**cyl-:** Referring to a cylinder.

**cymbiformis:** Boat-shaped; convex and keeled.

**cyme:** A broad, more or less, flat-topped determinate flower cluster.

**cymose:** Pertaining to an inflorescence with the central flowers opening first.

**cytogenetics:** The science of the part played by cells in causing phenomena of heredity, mutation, and evolution.

**cytoplasm:** the matrix in which cell organelles are located.

**cytokinins:** a class of chemical substances which promote cell divisions and certain other physiological responses in plants.

**cytokinesis:** the process of cell division.

## D

**dactylina:** Resembling fingers; finger-like.

**damp down:** To dampen by spraying the walks, benches, etc., of a greenhouse, lathhouse, or other growing area in order to increase the humidity but without watering the plants or pots.

**damping-off:** The rotting of seedlings or other new plants due to a fungus or bacterial infestation.

**dasy-**: Thick (dasystachys = thick spike of flowers).

**dasyliiriifolia:** Like the lily genus, *Dasyilirion*.

**day neutral:** flowering without regard to day length.

**deacidification:** a physiological process whereby malic acid formed by the dark fixation of CO<sub>2</sub> by a CAM plant is degraded to liberate CO<sub>2</sub> for re-fixation through the Calvin-Benson (C<sub>3</sub>) pathway.

**dealbata:** Whitish, or almost white; often with reference to flower bracts.

**de-**: From: out; of; off (decorticans = off skin; i.e., peeling bark)

**deciduous:** Refers to a plant that loses its leaves at the end of its growth period

**decipiens:** deceiving

**declinate:** Curving downwardly, or turning outwardly.

**decolor:** deprived of its natural colour, faded

**decomposers:** heterotrophic organisms (e.g., fungi and bacteria) capable of consuming organic detritus and reducing it to simpler substances which can then circulate in the ecosystem.

**decomposita:** Decomposed; more than once-compound or divided.

**decora:** Ornate; elegant; becoming; comely.

**decumbent:** Reclining or lying on the ground, but with the end ascending; usually referring to a shoot.

**decurrent:** Running down the stem; extending down the stem or ovary below the point of insertion.

**decurved:** Curved downward; bent downward.

**deflexed:** Turned downward abruptly.

**defoliation:** The shedding or loss of leaves either as a seasonal normality or as a consequence of disease.

**dehiscent:** Opening spontaneously when ripe for the release of the contents, such as seeds.

**deltate, deltoid:** Triangular; resembling a triangle with equal sides.

**density:** The degree of the closeness of flowers or foliage to each other (densiflora = having the flowers densely clustered, densely flowered; densifolius = densely leaved; densispica = dense spike).

**dent:** Referring to a tooth (dentate = with sharp spreading teeth, e.g., leaves deeply indented at regular intervals to appear like the cutting edge of a saw; denticulate = having very small tooth-like projections. ).

**deorsum:** downward, below, (opposite to sursum)

**deoxyribonucleic acid (DNA):** the chemical carrier of genetic information in cells.

**depauperate:** Dwarf; starved; reduced in form and function.

**depressed:** More or less flattened from the top.

**descending:** The direction gradually downwards.

**design restraint:** a feature inherent to a population of organisms which limits its options for further evolutionary adaptations.

**dessicate:** Without moisture; dried up.

**dessucate:** Opposite leaves in four rows in alternating pairs.

**determinate:** Definite cessation of growth at the apex or in the main axis. Said of an inflorescence when the terminal flower opens first and thus terminates further elongation of the floral axis

**deuter-:** second

**dexter:** to the right

**di-, dis-:** Two, twice

**diacritical sign:** a mark such as an accent or diaeresis connected with a letter, used to indicate pronunciation

**diaeresis:** a diacritical sign (¨) placed over one or two consecutive vowels to indicate that they are to be pronounced separately when they might otherwise be pronounced as one sound

**diagnosis:** that part of a plant description ( protologue) that compares the new plant with a recognised, closely related plant

**dichlamydea:** Two-garmented, referring to bracts in two series; provided with both calyx and corolla.

**dichogamy:** Having pistils and stamens maturing at different times, preventing self-pollination.

**dichotomous key:** Characterized by regular division into pairs from bottom to top; having a dual arrangement.

**diclinous:** Imperfect; having either stamens or pistils but not both; unisexual.

**dicotyledonous:** Having two cotyledons (seed leaves).

**didisticha:** Double distichous in vertical ranks.

**differentiation:** the developmental process whereby an immature, generalized cell becomes a mature, specialized one.

**difformis:** Of unusual form in comparison with the normal for the genus.

**diffuse:** Loosely branching or spreading: of open growth.

**diffusion:** the intermingling and scattering of particles (e.g., molecules) of substances, caused by their spontaneous movement.

**digitate:** Hand-like; compound with the members arising from one point.

**digitatus:** Shaped like an open hand; finger-like.

**dilated:** Expanding as a flattened surface to become larger or wider.

**dimerous:** Of two parts; having two members in each whorl as applied to flowers.

**dimorphic:** Referring to the occurrence of two different forms of flowers, leaves, etc., on the same plant or on distinct plants of the same species. "Leaves dimorphic would refer to a plant such as a *Pitcairnia* that may have very short and spiny leaves and others that are long and entire.

**dioecious:** The male and female flowers on different, individual plants.eg. *Hechtia* (except *gayiorum*)and some *Catopsis*

**diploid:** Having the normal complement of two similar sets of chromosomes.

**diplophase:** that portion of the life cycle in which the cells of the organism are diploid.

**discolor:** Having two different colors, usually referring to leaves that are one shade on top and another underneath.

**discrete:** Separate but not coalesced; distinct.

**disjunct:** Characterized by a separation of parts or formed into separate groups; not growing together; disconnected.

**dissemination:** Dispersal of reproduction structures such as seeds, fruit, or vegetative parts, chiefly through the agencies of water, wind, birds, and animals

**dissertation:** a written article on a certain subject that may be published ( See Publication) if not published only changes such as synonyms can be accepted

**dissitiflora:** Loosely flowered; well spaced flowers.

**distal:** Farthest from the place of attachment.

**distichantha:** Flowers arranged in two opposite rows.eg *Aechmea distichantha*

**distichous:** Arranged in two ranks, as the flower spikes of many vrieseas.

**distinct:** Separate; when petals are distinct, they are not joined at the edges.

**diurnal:** Opening or occurring during the daytime.

**divaricate:** Diverging or widely spreading. Generally applies to how branching occurs in a compound inflorescence.

**divergent:** Going in different directions from a common point; spreading out.

**dm:** Decimeter; a measure of length equal to 10 cm or 3.937 inches

**dodeca-:** twelve-

**dodrans:** distance between tips of thumb and little finger when extended, 9 inches, ca. 24 cm

**dome cell:** the uppermost stalk cell of a tillandsioid trichome.

**dominant allele:** a form of a gene which, when present in duplicate or with a recessive allele, will express itself in the organism's phenotype.

**dormancy:** the condition of being metabolically inactive.

**dorsal:** Back; relating to the back or outer surface of a part or organ.

**dorsifixed:** Attached by the back, applied especially to anthers.

**double:** Referring to flowers that have more than the usual number of floral envelopes, particularly of petals.

**double-cross:** the repeatable crossing of two F<sub>1</sub> hybrids

**downy:** Covered with weak, short, and soft hairs.

**drepanocarpa:** Section of the fruit curved like a sickle.

**drought endurer:** a plant sufficiently drought-resistant to remain active through the dry season.

**drought evader:** a plant which becomes dormant during the dry season and thereby avoids injury or death caused by desiccation.

**DUS test:** the criteria Distinctness, Uniformity and Stability by which a new cultivar is examined for statutory purposes such as the granting of Plant Breeders' Rights or the addition to a National List

## E

**e-, ex-:** Without: missing: out of; or from.

**ebracteatus:** Without bracts

**eburneus:** ivory white, white with a yellow tinge

**ecarinate:** Without keel; without a ridge.

**echinata:** Armed with numerous prickles or spines; prickly.

**eco-:** Habitat; environment.

**ecological succession:** the orderly progression of community changes which constitute the regenerative process following the disturbance of an ecosystem or the genesis of a new habitat.

**ecology:** The science that deals with the mutual relationship between organisms and their environment; particularly, the study of plant life in relationship to its environment.

**ecosystem:** an interacting system of living organisms and their supporting environment.

**ecotype:** A group of similar variants of a species that keep their individuality as a distinct group through environmental selection and isolation; a single such individual.

**ect-, ecto-:** On the outside; outwards.

**edaphic:** Referring to soil and topography, rather than climatic effects.

**edentate:** Without teeth

**efflorescentia:** period of opening of flower see anthesis

**effuse:** Loosely spreading; very diffuse.

**egg:** the female gamete.

**egg (megaspore) mother cell:** the diploid spore mother cell in an ovule which will undergo meiosis to generate the female haplophase (embryo sac).

**egregie, egregious:** excellent

**ejustem:** of the same

**elata:** Tall or tall in comparison with its near allies.

**elegans:** Choice; attractive; elegant.

**eleutheropetala:** With free petals, not united

**ellipsoid:** An elongated solid in which all the sections are ellipses or circles.

**elliptic:** Shaped like an ellipse; i.e., broadest at the center, tapering equally to base and apex.

**elongata:** Lengthened; elongated; stretched out.

**emarginate:** Having a notched margin at the apex.

**emasculate:** To remove the stamens of a flower before they dehisce or the pollen becomes ripe. Done prior to artificial hybridization.

**embryo:** The plantlet in the seed

**embryo sac:** the mature female haplophase.

**eminens:** standing out, projecting

**endemic:** Peculiar to a particular locality and not found elsewhere.

**endemism:** Quality or state of being endemic or native to a particular region.

**endo-, ento-:** Inside; inwards.

**endodermis:** a single layer of cells usually surrounding the vascular center of a root.

**endoplasmic reticulum:** an extensive system of membranes present in the cytoplasm of most cells.

**endosperm:** The albuminous (starchy) tissue that is enclosed in the embryo of the seed and serves to nourish it when germinating.

**endosperm nucleus:** the product of the fusion of the polar nuclei in the embryo sac and one sperm.

**ens-:** Referring to a sword (ensate or ensiformis = long, flat, two-edged, nearly or quite straight, with a sharp point; ensifolius = having sword-shaped leaves).

**-ensis:** Habitat, country, or place of origin.

**entire:** Margin not in any way indented; whole. Entire leaves have smooth edges

**entomophily:** Pollination by insects.

**enzyme:** a protein with catalytic properties designed to mediate a particular metabolic reaction.

**ephemeral:** Lasting only a short time; transitory.

**epi-:** On or upon; living on the surface of another.

**epicuticular wax:** waxy coating often seen in say *Alcantarea*

**epidermis:** The outer layer of cellular tissue enveloping the entire plant body, functioning as a protective covering and as a control against loss of water.

**epigynous:** Situated on the upper part of the ovary. Therefore ovary inferior. One of the characteristics of *Bromelioideae*

**epigynous tube:** A tube through the thickness of the top of the ovary

**epilithic:** growing on the surface of stone

**epiparasitism:** a parasitic relationship involving a fungal intermediate which serves as a conduit between the parasite and its host.

**epiphyte:** An airplant; a plant growing on another plant as a means of support only and deriving its needed moisture and nutriment from the air. It is not a parasite.

**epithet:** The scientific specific name applied to an organism; e.g., in *Tillandsia cyanea*, *cyanea* is the epithet.

**Epitype:** a specimen or illustration selected to serve as an interpretative type when the holotype, lectotype, or previously designated neotype, or all original material associated with a validly published name, is demonstrably ambiguous and cannot be critically identified for purposes of the precise application of the name of a taxon. (ICBN Ch. 2. Sec. 2. Art. 9.7) The holotype, lectotype, or neotype that the epitype supports must be explicitly cited when the epitype is designated (see Art. 9.18).

**erect:** Applied to flowers or floral bracts that stand up nearly parallel to the rachis to which they are attached.

**erectus:** Stately; proud; exalted.

**erose:** Having the margin irregularly notched as if gnawed.

**erubescens:** Becoming rosy-red; blushing.

**erythroductylon:** Red-fingered.

**erythrolepis:** Red-scaled.

**-escens:** Process of becoming but not fully achieved.

**essential elements:** chemical elements required by plants for normal growth.

**essentially derived variety:** a cultivar which whilst clearly distinguishable retains the essential characteristics of the cultivar from which it is derived. Essentially derived varieties may arise, for example, by mutation, selection or genetic engineering

**-estris:** Place of growth.

**et al, et alia:** and others. Used to abbreviate when more than one author to a paper, dissertation etc

**ethylene:** A gas used to force blooming in bromeliads.

**etiolate:** To blanch, as by the exclusion of sunlight. Said of plants usually grown in darkened conditions. The loss of color is caused by the conversion of the green chloroplasts to leucoplasts. Etiolated bromeliads often have long thin leaves.

**etymology:** the original linguistic derivation of a word

**eury-:** Broad (eurycorymbose = with a broad, more or less flat-topped, indeterminate flower cluster).

**eutroph:** a plant adapted to grow on a relatively fertile substratum.

**evanescent:** Of short duration; not lasting.  
**evolute:** Unfolded; turned back.  
**ex-:** Without; lacking; free from.  
**excavated:** Hollowed out.  
**excelsus:** Tall.  
**excurved:** Curving outward or away from the axis  
**exiduus:** weak, feeble  
**exotic:** Foreign; from another country; not native.  
**explant:** A tissue culture; a group of cells growing independently of the parent from which it was taken.  
**exserta, exserted:** Projecting beyond a common point; protruding .  
**Exsiccata, exsiccatum:** dried specimen/s as in herbarium  
**exsiccated:** Dry or dried; free from moisture.  
**extra-:** Outside of or beyond.  
**exude:** To discharge slowly through small pores.  
**extus:** outside

## F

**F1:** The first filial generation; often a constant breeding hybrid type.  
**F2:** The second filial generation; the progeny from the crossing or selfing of the F1. The number increases for each subsequent generation.  
**facies:** The general appearance or looks of a plant  
**facultative epiphyte:** capable of functioning under varying environmental conditions – see obligate  
**falcate:** Curved and flat, tapering gradually; scythe-shaped.  
**fallax, fallaciter:** deceptive , see also decipiens  
**family:** A major division or subdivision of an order; a group of related genera.  
**farin-:** Referring to starch or wheat (farinaceous = containing starch or starch-like material, like flour: mealy).  
**fasciata:** Marked transversely with broad parallel stripes of color; banded.  
**fasciate:** United or massed laterally.  
**Fasciation :** From Wikipedia, the free encyclopedia. Fasciation (or cresting) is a relatively rare condition of abnormal growth in vascular plants in which the apical meristem (growing tip), that normally is concentrated around a single point and produces approximately cylindrical tissue, instead becomes elongated perpendicularly to the direction of growth, thus producing flattened, ribbon-like, crested, or elaborately contorted tissue. Fasciation can also cause plant parts to increase in weight and volume in some instances. The phenomenon may occur in the stem, root,, fruit, or flower head. Some plants are grown and prized aesthetically for their development of fasciation. Any occurrence of fasciation has several possible causes, including hormonal, genetic, bacterial, fungal, viral and environmental. **Note** Because Bromeliads are monocotyledons this starts at the base of the plant – See also Cristate  
**fascicle:** A condensed or close cluster, as of flowers. see *Nidularium* as an example  
**fasciculata:** In close bundles or cluster.  
**fascinator:** Unusually attractive; fascinating.

**fastigiate:** Of habit when branching is erect and close together, so forming a columnar, conical, or pyramidal shape.

**fastuosa:** Proud.

**fauces:** throat

**fecundation:** Fertilization of the female by the male to form a new individual.

**fecundity:** the maximum reproductive potential of an organism.

**fenestralis:** With window-like openings; referring to the light-green rectangular areas on leaves which give the illusion of windows.

**ferre:** nearly, almost

**ferox:** Ferocious; very thorny; spiny.

**ferr-:** Referring to iron; rusty color (ferruginea = rusty red; ferruginous = rust-colored).

**fertile:** Capable of producing fruit.

**fertilization:** The effect of pollination resulting in the conversion of the flower into fruit and of the ovules into seed Also the application of nutrients to the plants and the growing medium.

**festucoides:** Grassy.

**fetid:** See foetid.

**fiber:** an elongate, tapered, thick-walled, sclerified, supporting cell.

**fibrous:** Fiber-like; containing fibers or thread-like parts.

**fide:** according to

**filaform:** Thread-like; long and very slender.

**filament:** In general, a thread-like structure; the thread-like stalk of the anther.

**fili-:** Thread (flicaulis = with thread-like stems; filiform = long and slender; filifera = having threads).

**fimbriate:** Fringed; bordered by fine hairs.

**fir bark:** A potting medium of chopped bark of certain firs, used either alone or a mixture. see also pine bark

**flabellata:** Branched; in the shape of a fan.

**flaccid:** Soft; lax and weak; not rigid.

**flagelliformis:** Long and slender like a whip: whip-like

**flammea:** Fiery red; flame-colored.

**flavous:** Yellowish.

**flexuosa:** Zigzag; tortuous; bending alternately in opposite directions.

**floccose:** With tufts or flocks of soft wool or woolly hair

**flora:** The plant population of a certain geographical area.

**floral bracts:** The structure just below the flowers: may be leaf-like or colored

**floral envelope:** The perianth or calyx and corolla.

**floral tube:** the tubular perianth of a perigynous flower, which is usually composed of the fused basal portions of the calyx, corolla and stamen filaments; also known as the hypanthium.

**floribunda:** Many flowered; free-flowering.

**floriferous:** Flower-bearing; blooming freely.

**florigen:** one or more currently unidentified hormone-like agents within the plant body which may be involved in the flowering process in some species.

**flower:** All the plant structures from and including the sepals inward. See Fig 7

**flower induction:** Forcing the blooming of a plant by artificial means, such as by use of

gases or chemicals.

**flumen:** River

**fluted:** With grooves or furrows.

**fly speck scale:** a sucking insect which produces small, hard, black scales on the leaves of certain bromeliads and other plants.

**foetid:** Having a disagreeable odor; fetid.

**foliaceous:** Leaf-like; said particularly of the sepals and calyx-lobes that in texture, size, or color look like small or large leaves.

**foliage:** The leaves of a plant.

**foliar:** Referring to a leaf.

**foliar feeding:** Fertilizing by means of spraying nutriment on the foliage.

**-foliate:** Pertaining to leaves; having leaves.

**foliosa:** Many leaved.

**food chain:** a sequence of organisms in an ecosystem arranged in the order of their feeding habits. The producers represent the first link in the chain, with the herbivores next, followed by progressively larger carnivores.

**foot candle:** Unit of illumination equivalent to that produced by an average candle at the distance of one foot. Used in measuring the light in a growing area, such as a greenhouse.

**foot cells:** small parenchyma cells located at the base of an epidermal trichome.

**forcing:** To quicken the induction of flowering by artificial means, such as by the use of gases or chemicals.

**forma:** A sub-group within a species displaying a minor characteristic, but not great enough to be called a variety.

**formica:** ant

**formosa:** Beautiful; handsome.

**formula:** In the designation of hybrids it is the names of the two parents connected by the multiplication sign x.

**fortis, fortiter:** strong, powerful

**fortuito, fortuitous:**

**founder group:** a small number of colonizing organisms potentially capable of generating a much larger, persistent population.

**four-strand stage:** the condition of the homologous pairs of chromosomes at meiotic metaphase when each consists of four chromatids.

**fragrance:** see smell

**free:** Not joined to other organs; as petals free from the stamens or calyx.

**free space:** that volume of a plant's body freely accessible to dissolved substances in adjacent aqueous solutions.

**friable:** Easily crumbled or pulverized; used in connection with a loose, porous soil

**frigida:** From cold regions.

**fructescence:** The maturing stage of fruit.

**fruit:** Capsule or berry containing seed

**frutescens:** becoming shrubby

**fugacious:** Short-lived; fading very rapidly; transitory.

**fugitive species:** a population characterized by a high potential growth rate and considerable vagility. These are opportunistic organisms adapted to exploit scattered (patchy), short-lived habitats.

**fulgens:** Shining; glistening.  
**fuliginous:** dirty-brown, almost black  
**fulvous:** Dull yellow; yellow-tinged with brown or gray; tawny.  
**funalis:** rope-like  
**funeris:** Funereal.  
**fungicide:** Any substance that destroys fungi.  
**funicle:** stalk of an ovule or seed  
**funnelform:** With the shape of a funnel; in bromeliads referring to the form of the rosette.  
**furcate:** Forked.  
**furfuraceous:** Scurfy; covered with bran-like scales or powder.  
**Fuscosis, fuscus:** Grayish-brown; dull brown.  
**fusiform:** Spindle-shaped; narrowed both ways from a swollen middle.

## G

**gamo-:** United; married (gamopetala = joined petals; gamosepala = with united sepals, having the calyx of one piece. )  
**gamete:** One of the sex cells, either male or female.  
**gangliiformis, ganglion:** knot-like  
**gemin-:** Referring to twins (geminata = occurring in pairs; geminiflora = twin-flowered).  
**gemma:** A bud or bud-like organ capable of reproducing the plant.  
**gemma:** A little bud or bud-like structure.  
**gender:** a grammatical characteristic of nouns in some languages that may determine the way in which they, and adjectives, articles and pronouns applied to them, are inflected; in Latin, Greek and many modern languages there are three genders; masculine, feminine and neuter  
**gene:** That part of a chromosome which is concerned with the transmission and determination of hereditary characteristics.  
**gene bank:** a place where genetic material is stored, usually as seed, and/or plant material, and conserved for future use  
**gene linkage:** the occurrence of distinct genes close together on the same chromosome. These genes will tend to be transmitted to progeny in the parental combination.  
**gene pool:** the total genetic material of an entire population.  
**gene regulation:** the control of the expression of an organism's genome by various factors within cells.  
**generation:** The epoch from one 1-celled stage of a plant to the next 1-celled stage. The period from birth to death.  
**generative nucleus:** that nucleus in the binucleate stage of an immature pollen grain which is destined to undergo mitosis to produce two sperm.  
**generic:** Of or pertaining to a genus.  
**genet:** the entire issue of a single seed. In asexually reproducing types, the genet includes all offshoots, root-sprouts, etc. derived from a single seed, no matter how numerous or widespread and whether or not they remain attached by an organic union.  
**genetic code:** the system which uses triplets of nitrogen base pairs along a DNA molecule to store and transfer genetic information.

**genetics:** The science of the causes and effects of inheritance and variations and the factors determining similarities and differences among individuals related by descent.

**geniculate:** Bent abruptly; joined.

**genitalia:** stamens and pistil, androecium and gynoecium

**genome:** the total genetic material of an organism.

**genotype:** The fundamental hereditary make-up of an organism.

**genuflexus:** bent like a knee

**genus:** A subdivision of a family consisting of one or more species which show common characteristics and appear to have a common ancestry. There are more than fifty genera belonging to the *Bromeliaceae*

**geo-:** Referring to the earth, the ground.

**geotropic:** Movements (by growth processes) as a reaction to gravity.

**germination:** The growth of an embryo or seed into a plantlet or individual plant.

**gibberellins:** a group of similar chemicals which cause elongation of stems and influence a number of other growth phenomena.

**gibbosity:** A swelling or bulging on one side or near the base.

**gigantea:** Very large; gigantic.

**gigas:** A giant, with reference to the size of the flower or the plant.

**glabrate:** Nearly glabrous; with a covering of non-persistent, or very sparse, hairs.

**glabrescent:** Slightly glabrous; tending to become glabrous or smooth.

**glabrous:** Smooth; glossy; without pubescence or hairs or scales.

**glabrum:** Smooth; not hairy.

**gladiate:** Sword-shaped or sword-like.

**gladioliflora:** With flowers resembling those of a gladiolus.

**gland:** A small protuberance: a secreting part or appendage; often used in the sense of glandlike.

**glandular:** Having or bearing secreting organs or glands.

**glanduliform:** Gland-like.

**glandulosa:** Bearing glands; glandular.

**glaucous:** Becoming bluish-gray or glaucous.

**glaucous:** Sea-green; covered with a bloom (powder) or whitish substance that rubs off.

**globose:** Spherical or round.

**glochidiate:** Barbed at the tip; pertaining to hairs or bristles when ending in two or more hooks.

**glomerate:** In dense or compact cluster or clusters.

**gloriosa:** Very beautiful; glorious; illustrious.

**glutinosa:** Sticky; glutinous.

**gracilis:** Slender; graceful.

**graminiform:** Grass-like.

**grand:** Large (grandiceps = large headed; grandis = large, imposing, showy).

**grandfather in:** A term used with hybrid name registration that is taking place many years after the hybrid was made and usually by someone other than the hybridist.

**granular:** Minutely or finely mealy; covered with very small grains.

**granuliferous:** Composed of, or covered with, very small granules.

**granulosa:** Composed of, or appearing as if covered by, minute grains.

**granum**, pl. **grana**: a stack-like arrangement of thylakoids in a chloroplast containing chlorophylls and carotenoids - the sites where light energy is captured during the photosynthetic process.

**graveolens**: strong-smelling

**grexes**: plural of grex, in other words more than one grex

**grex**: A group of species or hybrids: applied collectively to the offspring of a given cross; literally a flock or swarm. Generally identified by formula involving parents names by hybridists before allocating a Cultivar name.

**grex name**: a type of Group used in **orchid** nomenclature applied to the progeny of an artificial cross from specified parents.

**griseus**: grey, pearl-grey

**Group name**: a formal category denoting an assemblage of cultivars, individual plants, or assemblages of plants on the basis of defined similarity (see Grex)

**growth**: an irreversible increase in the size of an organism or its parts.

**guttata**: Spotted; speckled; referring to the foliage.

**gymnotrya**: A raceme without covering.

**gymnos-**: Naked; not covered.

**gynoecium**: The female or pistil-bearing part of the flower.

## H

**habit**: The appearance; general mode or style of growth.

**habitat**: Place of growth; the type of locality in which a plant normally grows.

**habitus**: condition, appearance, manner of growth

**haem-, haemat-**: blood-red

**hairs**: A general term for many kinds of small and slender outgrowths on the epidermis of plants. Special kinds of hairiness are designated as setose, villous, comose, pubescent, and hirsute.

**halophyte**: A plant that shows wide tolerance of, or is able to adjust to, saline or alkaline soils.

**hamate**: Hook-shaped.

**hamosa**: Hooked.

**hapaxanth**: A plant that flowers or fruits but once with no offsetting. - a better term than Monocarp.

**haploid**: Having the basic chromosome number for the species; single in appearance or arrangement.

**haplophase**: that portion of the life cycle in which the cells of the body of an organism exist in the haploid state.

**hapuu**: Hawaiian tree fern fiber used for potting bromeliads and orchids. Used also as slabs for mounting epiphytic plants.

**hardening**: Referring to growth; a temporary adaptation for tolerance to low or extremely fluctuating temperature.

**hastate**: Of the shape of an arrowhead, but with the basal lobes pointing outward instead of backward

**haud**: not at all

**haustorium**, pl. **-oria**: the invasive appendage which a parasite employs to draw nutrients from a host.

**head**: A dense cluster of sessile or nearly sessile flowers; a short, dense spike.

**hebdomalis**: weekly

**hecat-, hecto-**: hundred

**Hechtioideae** One of the 8 subfamilies of the *Bromeliaceae*. Type *Hechtia*

**hedy-** : sweet, **hedyosmus**, sweet scented

**helicoid**: Watch spring; referring to certain billbergias that have slightly recoiled petals.

**heliconioides**: Resembling a heliconia.

**heliophile**: Requiring a great light intensity and relatively little humidity.

**heliophyte**: A sun lover.

**helvus**: light bay, pale red,

**hemi-**: Half.

**hemiphyte**: a plant that naturally grows as an epiphyte but has extended its roots into the ground to grow independently

**hendeca-**: eleven-

**hepaticus**: liver-coloured, dark reddish-brown

**hepta-**: Seven; of seven parts.

**herb**: A plant, such as a bromeliad, with no persistent woody stem above the ground.

**herbaceous**: Refers to a plant which has a stem that is not woody, like that of trees or certain shrubs.

**herbarium**: A collection of plant specimens that are dried or otherwise preserved, annotated, identified, and systematically arranged.

**heredity**: The resemblance among individuals related by descent.

**hermaphrodite**: A flower with both stamens and pistils; same as bisexual.

**hetero-**: More than one kind.

**heterantha**: Variable in flowers.

**heteroblastic**: showing a marked difference in form between juvenile and adult structures

**heterochromic**: multicolored.

**heteroclamydeous**: Having more than one kind of covering; i.e., dissimilar sepals and petals in *Bromeliaceae*.

**heterogeneous**: not uniform in structure

**heteromorphous**: Of more than one kind or form.

**heterophylla**: Having various leaves; with leaves of more than one shape.

**heterosis**: Hybrid vigour. It is sometimes observed that the offspring of cross-mating between different species often grow quicker in the first generation and ultimately grow larger than the parents. This effect is important in the cultivation of plants.

**heterostachys**: Different spike; referring to one which is lax at the base and dense at the top.

**heterothetic**: Compound raceme inflorescence not ending with a final raceme

**heterotroph**: an organism which is incapable of manufacturing the food it needs from simple inorganic substances; opposite of autotroph.

**heterotypic or taxonomic synonyms**: are synonyms that refer to different types with which different names are associated, but which the scientist concerned considers to be the same taxon but different type. Sometimes shown with an = sign

**heterozygous:** having different alleles present at the locus of a gene on homologous chromosomes.

**hexa-:** Six; of six parts (hexagonus = six-angled).

**hians:** gaping, open-mouthed

**hibrida:** hybrid

**hic:** here

**hierarchy:** the categories of taxa arranged in order according to their rank. Under the ICBN a lower taxon cannot belong to more than one taxon in the rank above; however, the ICNCP does allow for the inclusion of a cultivar in more than one Group in contrast to the principle of strict inclusivity enshrined in the ICBN

**hieroglyphica:** Referring to markings that resemble hieroglyphics or ancient writings.

**hilum:** the mark or scar on a seed produced by separation from its funicle or placenta

**hinnuleus:** fawn-coloured

**hirsute:** Covered with long, rather coarse or stiff hairs.

**hirsutulous:** Somewhat hirsute.

**hispid:** Provided with stiff or bristly hairs.

**hoary:** Covered with a close white or whitish pubescence.

**holdfast:** Roots whose primary function is to secure a plant to its host.

**holotype:** The one specimen or illustration used by the author or designated by the author as the nomenclatural type

**homo:** Very similar; one of a kind; alike.

**homocarpous:** With all the fruits, as of a flower-head, alike.

**homoecious:** covers Catopsis species that have exclusively perfect flowers

**homogeneous:** uniform in structure

**homologous:** Corresponding in type of structure.

**homologous chromosomes:** chromosomes that bear the same genes and pair at the prophase stage of the first division of meiosis.

**homology:** a similarity between two organisms due to a shared evolutionary (genetic) background.

**homomorphic:** Uniform; all the given parts alike.

**homonym:** A name spelled exactly like another name published for a taxon of the same rank based on a different type. Note. Names of subdivisions of genera or infraspecific taxa with the same epithet even if of different rank are treated as homonyms disregarding the connecting term. Not considered valid

**Homotypic or nomenclatural synonyms:** occur when each species recognised, can only have one correct name within a particular genus. Homotypic synonyms come about when a name is nomenclaturally incorrect or sometimes when a species is moved from one genus to another. Sometimes shown as an  $\equiv$  sign

**homozygous:** having the same alleles present at the locus of a gene on homologous chromosomes.

**hooked:** Abruptly curved at the tip.

**horny:** Hard and dense in texture; corneous.

**horridus:** Provided with spines or barbs; rough; forbidding.

**hortensis:** pertaining to gardens

**host:** A plant that supports another; a tree on which epiphytes grow.

**humidity:** Moisture; dampness. Absolute humidity indicates the amount of vapor

actually present in the air. Relative humidity is the ratio of the quantity of vapor actually present to the greatest amount possible at the given temperature.

**humilis:** low, low-growing

**humus:** Decomposing organic matter in the soil.

**hyacinthus:** hyacinth-blue

**hyaline:** Thin and translucent, but rarely transparent.

**hybrid:** the result of a cross between differing plants or taxonomic units

**hybrid swarm:** a population made up of individuals carrying various mixtures of genes from two or more distinct but interbreeding populations.

**hybrid vigor:** See heterosis.

**hybridization:** The crossing of different taxa.

**hydrophilic:** having an affinity for water.

**hydrophobic:** water-repelling.

**hydroponic culture:** the process of growing plants in aqueous nutrient solutions rather than in soil.

**hygrocope:** An instrument that shows variations in the moisture of the atmosphere.

**hygroscopic:** Capable of absorbing moisture from the atmosphere.

**hylaea:** tropical rainforest

**hypanthium:** a fleshy, cup-shaped part situated above or below the ovary and bearing the sepals, petals, and stamens. See *Alcantarea*

**hyper-:** Above; over.

**hypo-:** Below; under.

**hypocotyl:** that portion of the embryonic stem located between the points where the cotyledon is attached and the first root begins.

**hypodermis:** a layer of colorless tissue located interior to an epidermal layer - it usually functions in water storage.

**hypogynous flower:** A flower with petals and sepals attached under the ovary. Therefore ovary superior. One of the characteristics for most of the *Tillandsioideae*

**hypophyllous:** On the undersurface of the leaf.

**hypothesis:** An assumption based on available evidence but not proven beyond doubt.

**hysterogenous:** late-produced, e.g. leaves produced after flowering

**hystrix:** Porcupine-like; bristly.

## I

**iadinus:** jade-green

**IAPT:** International Association for Plant Taxonomy

**ibidem:** in the same place, in that very place

**ICBN:** International Code of Botanical Nomenclature covers description of species (plants found in the wild)

**ICNCP:** International Code of Nomenclature of Cultivated Plants covers naming of plants in cultivation both variations of species AND man-made hybrids

**icon:** an illustration, plate

**ICRA:** International Cultivar Registration Authority – Bromeliad Society International for Bromeliaceae

**idem, eadem:** the same

**IDENTIFICATION** : of species is based mainly on a Holotype herbarium specimen and a protologue. Derek Butcher has most protologues on record and these can be supplied on request. These are also available on TAXON and it may be worthwhile joining WWWBromeliad Society. If you are serious in trying to identify a species App 3 and 3a may help

**igneous**: Red; fiery in color.

**ignotus**: unknown

**illustris**: Brilliant; lustrous.

**imbibition**: the absorption of moisture by insoluble hydrophilic substances.

**imbricate**: Overlapping, like the shingles of a roof **does not mean** bracts appressed to the peduncle

**immersed**: Referring to a part when enclosed (at least partially) by another structure.

**imminens**: overhanging

**imminuens**: diminishing

**impendens**: overhanging

**imperfect flower**: A flower with either stamens or pistils, but not both; flower with only one sex . eg. *Hechtia* (except *gayiorum*) and some *Catopsis*

**imperialis**: Regal: imperial.

**impressed**: Deeply nerved; furrowed and grooved as if by pressure.

**inbreeding**: Breeding through successive generations of the same stock.

**imum**: lowest part

**inanis**: empty

**incanus**: Hoary, white

**incarnatus**: flesh coloured

**inchoatus**: incomplete, unfinished

**incised**: Cut; slashed irregularly, more or less deeply and sharply.

**included**: Not protruded, as stamens not projecting from the corolla.

**incola**: dweller

**incomplete dominance**: a condition in which an allele continues to express some phenotypic effect when combined with another allele.

**incomplete flower**: Lacks one or more of the four parts (sepals, petals, stamens, pistils) usually making up a complete flower.

**incrassate**: Thickened.

**incurvate**: Incurved; curved inward.

**incurvus**: Crooked; bent; curved inward.

**inde**: from that place, thence, from that time

**indefinite**: Numerous, usually more than 20; any number above a readily obtainable estimate; an indeterminate inflorescence.

**indehiscent**: Not regularly opening as a seed pod or anther; remaining closed at maturity

**independent assortment**: the random distribution of unlinked genes to haploid daughters when a diploid mother cell undergoes meiosis.

**indeterminate**: Growing on from the apex, particularly the main axis. An inflorescence that continues to develop new flowers at the tip for an indefinite length of time.

**indigen**: A plant that is native or indigenous to a certain locality.

**indigenous**: Native to a certain country; not imported.

**indument**: A covering of hair.

**indumentum:** The covering of leaves and bracts; in bromeliads this consists of trichomes.

**induplicate:** With margins folded inwardly.

**indurate:** Hard or hardened.

**inermis:** Unarmed; without thorns or spines.

**inferior:** Beneath; lower; below.

**inferior ovary:** the position of the ovary in an epigynous flower. The basal portions of the other floral parts are fused together and to the ovary wall and thus appear to originate at the top of the ovary.

**inflata:** Swollen; inflated.

**inflexed:** Bent or turned abruptly inwards or downwards.

**inflorescence:** Wrongly used as the part of the plant that holds or contains the flower or flower cluster; the mode of flowering **Should be** all organs for displaying flowers including peduncle. See Fig 4 & 4a

**infra-:** Below; beneath.

**infrageneric:** pertaining to any taxon below the rank of genus

**infraspecific:** pertaining to any taxon below the rank of species

**infructescence:** A fruit-bearing shoot.

**infundibuliform:** In the shape of a funnel.

**inserted:** Attached, as a stamen growing on the corolla.

**insignis:** Admirable; distinguished; noble.

**integrifolia:** With entire leaves.

**integument:** An outer covering, such as a skin.

**inter-:** Between, particularly between closely related parts or organs.

**intercalary meristem:** a meristem positioned between tissues composed of mature cells, as at the base of a growing bromeliad leaf between mature leaf and stem tissues.

**intergeneric hybrids:** Hybrids between species of two or more genera.

**intermedia:** Intermediate in color, form, or habit: halfway.

**internode:** The part or space of a stem between two nodes or joints.

**interphase cell:** a cell which is not dividing.

**interspecific:** Between or among two or more species pertaining to hybrids.

**intortus:** twisted or bent upon itself

**intra-:** Within (within a species).

**introduction:** The bringing of an exotic plant by man or other agency from its native habitat to another area.

**introgressive hybridization:** breeding activity between two distinct populations in which backcrossings to one or both parents allow genes to move between the parental populations.

**introrse:** Turned or faced inward or towards the axis.

**intumescens:** Swollen; puffed up; tumid.

**intumescence:** A protuberance formed by abnormal growth at the surface of an organ or part.

**inverted:** Turned over; end-for-end; top side down.

**involucral bract:** a bract located at the base of the fertile portion of an inflorescence.

**involucrata:** Circle or collection of bracts.

**involucre:** A whorl of small leaves or bracts situated close underneath a flower or flower

cluster.

**involute:** Referring to a flat body, such as a leaf, that is rolled inward or toward the upperside.

**-ioides:** Resembling or like.

**ion:** an atom or molecule which has gained or lost electron-(s) and thus carries an electrical charge.

**ionantha:** Violet-flowered.(wine coloured)

**iridiflora:** With flowers like those of an iris.

**iridifolia:** With iris-like leaves.

**irregular:** A vague term used to show inequality in the size, form, or union of similar parts

**isabellinus:** soiled tawny yellow

**ISHS:** International Society for Horticultural Science

**ISO:** International Organisation for Standardisation

**iso-:** Equal.

**isomorphic:** Referring to parts or individuals when identical in shape or form.

**isonym:** The same name based on the same type, published independently at different times by different authors. Note: only the earliest isonym has nomenclatural status

**isosyntype:** A duplicate of a syntype

**isotype:** A duplicate specimen of the holotype

**italics:** the printer's slanting typeface often used to distinguish scientific names when used in a formal taxonomic sense

**iteroparous:** producing flowers and fruit more than once before dying

**IUBS:** International Union of Biological Sciences

**ixioides:** Resembling plants of the iris genus *Ixia* (*Iridaceae*).

## J

**jointed:** With nodes or points of real or apparent articulation.

**jucunda:** Delightful.

**juncea:** Resembling a reed.

**juncifolius:** Rush-leaved.

**juvenile leaves:** The leaves appearing immediately after the seedling leaves, frequently differing in form and size from the adult leaves.

**juxta:** near, nearby

## K

**keel:** A ridge on the outside of a fold; the longitudinal ridge on a leaf.

**kermesiana:** Crimson.

**key:** A table in which the salient characteristics of a group of plants ( or species, genera, etc. ) are arranged so as to facilitate the determination of their names and/or taxonomic relationships.

**kinen:** A plant-growth substance.

**kinetic concept of matter:** the notion that atoms and molecules making up all matter are in constant vibrating motion at speeds determined by their temperature.

**kinetosome:** a microtubule organizing center associated with the centromere.

**K-selecting environment:** an environment where the major restraints on life favor the evolution of certain life history traits including an extended juvenile phase, prolonged adult life, and relatively parsimonious allocations of resources to reproductive, as opposed to vegetative, organs and activities.

## L

**laccatus:** Looking as if varnished.

**lacerate:** Torn; irregularly cleft or cut.

**lachno-:** woolly

**laciniate:** Margins cut into narrow, more or less equal segments.

**lactaneus, lacteus, lactineus:** milky, milk-white, white with a blue tinge

**laetus, laete:** cheerful, pleasant, bright

**laevis:** Smooth; having a smooth, polished surface.

**lageniform:** Flask shaped

**lamella:** A thin, flat plate or laterally flattened ridge.

**lamina:** The blade of a leaf or petal or other expanded part or body.

**lamine:** Covered with scales or plates.

**lampro-:** Shiny.

**lanate:** Woolly; covered with something resembling wool.

**lanceolate:** Lance-shaped; much longer than broad; widening above the base and tapering to the apex.

**lanolin:** Wool fat or grease.

**lanuginosus:** Covered with down or soft hair; woolly.

**lasi-, lasio- :** woolly

**lateral:** Arising from, or at the side of, an axis or structure.

**lateral inflorescence:** One that comes from the side instead of the center.

**lateralis:** From the side; on or at the side.

**lateritius, latericius:** dark brick-red

**lath house:** A slat house; a lattice-work structure providing filtered light for plants.

**latifolia:** Broad-leaved.

**Latin binomial:** the two-word Latin name, consisting of generic and specific epithets, assigned to each described species.

**lax:** Loose; distant. The term is applied to the inflorescence and describes the degree of closeness of the flowers. A lax inflorescence would indicate that the flowers are not touching one another.

**laxiflora:** Loose-flowered.

**leaching:** Generally used to indicate the washing out of solutes in the soil by watering.

**lead:** A young, new vegetative growth.

**leaf:** outlines, tips, margins see Fig 5, 5a, 5b. Can also apply to other plant parts

**leaf-blade:** The upper portion of the leaf; beyond the rosette in most species.

**leaf-sheath:** The lower portion of the leaf; that part forming the rosette; the basal and wider portion of the leaf.

**leaf trace:** a vascular strand which branches off a vascular bundle in the stem and extends to the base of a leaf, becoming a foliar vein.

**leathery:** See cori-.

**lectotype:** A specimen or illustration designated from the original material as the nomenclatural type if no holotype was indicated at the time of publication, or if it is missing, or if it is found to belong to more than one taxon .

**leopardinum:** Spotted like a leopard.

**lepidote:** Surfaced with small scales (trichomes), a key characteristic of the family *Bromeliaceae*. The scales may be fine and scarcely visible to the naked eye, or they may be coarse and spreading and highly visible.

**lepto-:** Thin; slender; narrow.

**leptostachya:** Thin stemmed.

**leuco-:** White; pale.

**leucolepis:** Covered with a white scurf or scales.

**leucophylla:** White-leaved.

**life zone:** a region characterized by a specific range of adaptive features and environmental tolerances.

**light compensation point:** that light intensity at which photosynthetic output of O<sub>2</sub> balances respiration intake.

**light saturation point:** that light intensity at which photosaturation occurs and above which no further increases in photosynthetic rate are possible.

**light use efficiency (LUE):** the efficiency with which photosynthetically active radiation (PAR) is converted to bond energy in organic substances produced by a green plant, expressed as the amount of food produced per unit of PAR per unit of leaf area per unit of time.

**lignin:** an abundant constituent of cell walls of such structures as fibers and tracheids, giving them strength and rigidity.

**ligulate:** Shaped like a strap; ligulate.

**ligule:** A strap-shaped organ or body; particularly a strap-shaped corolla; a projection from the top of a sheath.

**liguliform:** Having the form of a ligule or thin appendage.

**lilacinus:** lilac

**limb:** An expanded part; as in the expanded portion of a petal above a petiole-like claw.

**limbate:** Having a distinct border of some other color.

**Lindmanioideae** One of the 8 subfamilies of the *Bromeliaceae*. Type *Lindmania*

**line, linea:** Equals approx 2.1mm

**line:** a plant breeding term used to describe plants resulting from repeated self-fertilization or inbreeding (ICNCP Art 2.14)

**linear:** Long and narrow; the sides parallel or nearly so.

**lineate:** Lined; marked by thin parallel lines.

**lineata:** With thin lines or stripes.

**lingulata:** Tongue-shaped.

**lithophyte:** A plant that grows on rocks but obtains its nourishment from the atmosphere and forms accumulated humus in the fissures.

**littoral:** Pertaining to the seashore; coastal.

**lobe:** Any part or segment of an organ; specifically a part of the petal, calyx or leaf that represents a division in the middle.

**lobule:** A small lobe.

**locule:** Compartment or cell of a pistil or anther.

**loculicidal:** Dehiscence between the partitions into the cavity.  
**locus:** the position on a chromosome where a specific gene is located.  
**loliacea:** Resembling the grass *lolium*.  
**long-day plant:** a plant which flowers only if exposed to day lengths exceeding some minimum.  
**longifolius:** Long-leaved.  
**longipes:** Long-footed; long-stalked.  
**longipetala:** With long petals.  
**longitudinal stripes:** generally refers to variegation in Bromeliads  
**loratus:** ligulate  
**lucida:** Shining; bright.  
**lumping:** to treat as members of a single taxon elements which have previously considered as belonging to more than one such unit  
**luridus:** dirty-brown, smoky-yellow  
**luteus:** Yellow.  
**luxury consumption:** the acquisition of some nutrient by an organism beyond its immediate needs for that substance.

## M

**m:** Meter, a measure of length equal to 39.37 inches or 10 decimeters.  
**macr-, macro-:** Long; large; great.  
**macranthus:** Large-flowered.  
**macrodontes:** With large teeth.  
**macron (overscore):** the diacritical sign ( ¯ ) sometimes used above vowels to indicate that they should be pronounced long  
**macronutrients:** The 6 essential mineral elements (Ca, K, Mg, N, P, and S) which plants require in relatively large quantities compared to micronutrients.  
**macrophylla:** Large-leaved.  
**maculate:** Spotted; blotched; marked with spots.  
**magni-:** large  
**magnifica:** Showy; magnificent; of splendid appearance.  
**maidifolia:** Corn-like leaves.  
**major:** Greater; larger.  
**Malthusian coefficient (r):** a numerical index expressing the inherent maximum rate at which a population can grow.  
**marcescent:** Withering, but not falling away.  
**margaritaceus, margaritatus:** pearly, pearl-like  
**margin:** Edge of leaf, sepal, petal etc  
**marginata:** Furnished with a margin or border of distinct coloration.  
**marginate :** as above, when used for cultivars  
**maritimus:** Of the sea or shore.  
**marmoratus:** marbled, irregularly striped or veined

**mass flow hypothesis:** a theory describing the movement of food materials in phloem tissue in terms of the loading and unloading of sugars at opposite ends of the sieve tubes and concomitant influxes and effluxes of water by osmosis.

**maxima:** The largest or greatest of its kind.

**(M. D.)** in Bromeliaceae, Baker 1889 means that there is an original drawing of the plant in the Morren collection now at Kew.

**mealy:** Refers to a surface that is covered with small particles.

**-media:** The middle; intermediate.

**medial:** Refers to the center of a structure.

**medio-picta:** a form of variegation where the center of the leaf is a whitish colour

**medium:** A potting mixture of any kind; also a nutrient substance, either liquid or jelly-like, used in the germination of certain seeds (pl. media).

**medusae:** Refers to Medusa, one of the Gorgons, whose hair was changed into serpents.

**mega-, megalo-:** Big; great; large.

**megaspore mother cell:** see egg (megaspore) mother cell.

**meiosis:** a series of two nuclear divisions which reduces the chromosome number from diploid in the mother cell to haploid in the daughter cells.

**mel-, melan-, melano-:** Black; very dark.

**melandonta:** Black-spined; with black teeth.

**meleagris:** Speckled, resembling the spots on a Guinea hen.

**membranaceous:** Skin-like; thin, pliable and often transparent.

**mericlone:** A plant that is the result of meristeming.

**meridionalis:** South or southern.

**meristem:** The growing tissue made up of actively dividing cells, particularly at the tips of roots and at the apex of vegetative or floral shoots.

**meristem culture:** the asexual propagation of plants by aseptically culturing small pieces of their meristems.

**mesic:** Moist; without periods of drought.

**meso-:** Middle.

**mesophyll:** the photosynthetic parenchyma tissue within a leaf.

**mesophyte:** A plant with optimum growth within the mean temperature and moisture gradients; i.e., in places without dry seasons.

**mesophytic:** Growing under medium moisture conditions.

**messenger-RNA (m-RNA):** a single-stranded ribonucleic acid molecule, synthesized along a DNA template, which contains transcribed genetic information.

**metabolism:** The chemical changes in living cells by which the energy is provided for the vital processes and new material is assimilated to repair the waste.

**metaphase:** the stage in the division of nuclear material in which the chromosomes gather in the center of the cell.

**micans:** Glittering; sparking; mica-like.

**micrantha:** Small-flowered.

**micro-:** Small.

**microcalyx:** With a small calyx.

**microclimate:** The temperature, light conditions, and humidity found in one small area; e.g., in one's garden.

**microlepis:** Covered with small scale.

**micronutrients:** 7 essential elements (B, Cl, Cu, Fe, Mn, Mo, and Zn) which plants require in relatively small quantities compared to the macronutrients

**microps:** Small.

**micropyle:** a pore-like opening in the outer sheath of an ovule through which the pollen tube enters just prior to fertilization.

**microspore mother cell:** see pollen (microspore) mother cell.

**microtubule:** a proteinaceous tubular structure with varied functions in the cell - e.g., microtubules comprise the spindle apparatus of dividing cells.

**microtubule organizing center:** a region in the cell where microtubules are generated.

**middle lamella:** the region between the primary walls of adjacent cells which, filled with cementing material, holds the cells together.

**mineral procurement (MP) competence:** the ability of an organism to procure an element rapidly to levels beyond its immediate needs even from a dilute source.

**mineral procurement (MP) index:** the ratio between the amount of a mineral actually taken up by a plant versus that available.

**miniata:** Vermillion; cinnabar-red; flame-scarlet.

**minima:** Least; smallest.

**minor:** Smaller.

**minuta:** Very small; minute.

**mirabilis:** Wonderful; marvelous.

**mitis:** Mild; gentle.

**mitochondrion, Pl. -dria:** the membrane-bound organelle, found in the living cells of all higher plants and animals, where respiration takes place.

**mitosis:** the division of a cell nucleus into two daughter nuclei, usually followed by cytokinesis.

**mm:** Millimeter; a measure of length equal to 0.03937 of an inch or 1/25 of an inch.

**monadelph:** With filaments and stamens united in one set or bundle.

**mono-:** One; single.

**monocarp:** A plant that flowers or fruits but once with no offsetting. Better term Hapaxanth.

**monoclinous:** Hermaphroditic; perfect; the two sexes in the same flower.

**monocotyledon:** One of the two classes of angiospermous (seeds in a closed ovary) plants, characterized in the main by producing seeds of a single cotyledon or seed leaf. ie. *Bromeliaceae*

**monoecious:** The male and female parts are in the same flower. As in most *Bromeliaceae*

**monograph:** A treatise on a particular subject, such as one genus or family.

**monohybrid cross:** a cross between two organisms possessing different alleles of a particular gene.

**monopodium:** A main or primary axis that continues its original line of growth, giving off successive axes or lateral branches.

**monostachia:** Having one spike.

**monostichous:** In one row.

**monospecific:** A family or genus with a single species.

**monotypic:** Represented by a single member.

**monstrosity:** An abnormal type of development; a deformity .

**montana:** Pertaining to mountains; growing on mountains.

**morphogenesis:** the formation and development of an organism or its parts.  
**morphology:** The study of the form and structure of plants without reference to the functional processes.  
**mucilagenous:** Moist and viscid; sticky.  
**mucro:** A short and sharp abrupt tip.  
**mucronate:** Having an abruptly projecting point, as a leaf; an apex having a short tooth-like tip.  
**mucronulate:** Minutely mucronate.  
**mule:** An old designation for a cross, particularly between different species; usually denotes sterility.  
**multi-:** Many.  
**multiple fruit:** a type of fruit consisting of the ripened ovaries of two or more closely associated flowers - e.g., the Pineapple.  
**multiplication sign (×):** in nomenclature, the symbol used to indicate a hybrid  
**multicaulis:** With many stems.  
**multigeneric:** Referring to hybrids containing several genera.  
**multi-utriculate;** flower fascicles more or less evenly distributed along the short inflorescence axis  
**musaica:** With mottling resembling a mosaic.  
**mutable:** Variable in form or color.  
**mutant:** an individual produced as a result of mutation  
**mutation:** a spontaneous or engineered change in the genotype (genetic make-up of an individual), which may alter the phenotype (the sum total of all the characteristics of an individual plant) (Comment - in other words what the genotype actually looks like)  
**mutinous:** Without a point; blunt.  
**mycorrhizas:** roots harboring symbiotic fungi. Mycorrhizas may be more effective in the absorption of certain elements than uninfected roots  
**myosura:** Like the tail of a mouse.  
**myri-:** Countless; numerous.  
**myrmecophiles:** Those plants in which the basal portion of the rosette is swollen into a hollow chambered bulb that is usually infested with ants. EG *Tillandsia caput-medusae*

## N

**naked:** Without covering; naked petals are those without nectar scales at their base. See glabrous.  
**nanus:** Dwarf.  
**nascent:** Becoming formed; arising.  
**natural hybrid:** The crossing of two different species because of proximity in a certain locality .  
**naturalization:** The process of adapting to a new environment; successfully competing with natives without special aid or protection.  
**navicular:** Boat-shaped; cymbiform.  
**Navioideae** One of the 8 subfamilies of the *Bromeliaceae*. Type *Navia*  
**necrotic:** The condition of cells and tissues killed through disease or injury.

**nectar:** The sugary secretion of a plant which attracts the insects or birds that pollinate the flower.

**nectariferous:** Nectar-bearing.

**nectar scales:** Spurs or pockets at the base of the petals that contain nectar

**nectary:** The gland or tissue that secretes the nectar.

**nemoral:** Growing in shady places, in woods, or in groves.

**neo-:** New.

**neoteny:** The condition of having the period of immaturity indefinitely prolonged.

**neotropical:** Pertaining to the tropical regions of South America, the West Indies, Central America, and parts of North America.

**neotype.** A specimen or illustration selected to serve as nomenclatural type if no original material is extant or as long as it is missing

**nephroid:** Kidney-shaped; reniform.

**nerve:** A slender rib or vein, particularly if not branched. Nerved means that the veins are plainly showing.

**nest epiphyte:** an epiphyte with a preference, perhaps exclusive in some cases, for growing in arboreal ant nests.

**netted:** Marked with reticulated lines or nerves that project somewhat above the surface.

**neuter:** Neutral; with no functional stamens or pistils; with no parts functionally fertile.

**niche:** the role played by an organism within its ecosystem.

**nid:** Nest.

**nidularioides:** Nest-like.

**nidulate:** Nested; as if like or borne in a nidus or nest.

**niger, nigra-:** Black.

**nigrescent:** Blackish; becoming black; almost black.

**nitens, nitida:** Shining; lustrous.

**nitrogen base:** a nitrogen-containing molecule having basic properties - one of the three constituent molecules which make up nucleic acids

**nivalis:** pertaining to snow, snowy

**NN:** Nurseryman's Name, Nickname, Nomen nudum. In other words a plant name that is not recognised under the ICN rules or in the BCR

**nobles:** Remarkable for its fine qualities; noble; eminent.

**noctiflorus:** night-flowering

**node:** A joint where a leaf is borne or may be borne; any swollen or knob-like structure.

**nodose:** Knotty or knobby.

**nodule:** A swelling caused by excessive development of tissue.

**nodulose:** Having nodules or small knots or knobs.

**nomenclature:** Naming of groups of organisms in conformity with an international code designed for precision and universal comprehension.

**nomen nudum** (nom. nud. Or n. n. ). A name of a new taxon published without a description or diagnosis or reference to a description or diagnosis

**non alior:** not like others (not specified therefore vague)

**notate:** Spotted; marked by lines.

**nothogenus:** a name at generic level for a hybrid between two or more species in different genera, customarily preceded by a multiplication sign (×)

**nothospecies:** a name at species level for a hybrid between two or more species, customarily preceded by a multiplication sign (×)

**noto-:** southern, south or dorsal, back-

**Novar:** a term used where a cultivar is registered as a variegated plant and 'loses' its variegation

**novem:** nine

**nova, novus:** new

**nucellus:** the soft nutritive tissue interior to the outer sheath of an ovule where the embryo sac (female diplophase) develops

**nucleolus:** a densely staining body composed of RNA and protein, located within the nucleus.

**nucleotide:** a subunit of a nucleic acid, composed of a phosphate group, a five-carbon sugar and a nitrogen base.

**nucleus:** The kernel of a seed; the central denser structure of a cell containing the chromosomes.

**nudicaulis:** Bare-stemmed.

**Nurserymen's names: In short - N.N.** which means the same as nomen nudum or n. n. in Botanical parlance -names used by nurserymen or sellers of plants, for plants that are said to be different but not described under the ICN rules nor on the BCR.

**nutans:** Nodding, generally referring to the inflorescence.

**nutant:** Bending downwardly; drooping.

**nutrient:** The chemical or substance needed for growth.

**nutrient solution:** A liquid solution of chemicals or organic materials used for growth or germination.

**nutrition:** The process by which nutrients are absorbed by a plant and converted into living tissue.

**nutritional piracy:** a type of nutrition practiced by some epiphytes by which they intercept nutrients cycling between host crowns and substrata in a forest ecosystem.

## 0

**ob-:** Inversely or oppositely.

**obconic:** Inversely conical; cone attached at the small point.

**oblanceolate:** Inversely lanceolate; with the broadest part of a lanceolate body away from the point of attachment.

**obligate epiphyte:** cannot survive in epiphytic or lithophytic conditions, in other words not recommended for pot culture

**oblique:** Slanting; having unequal sides; not in symmetry .

**oblong:** Longer than broad, and with the sides nearly or quite parallel most of their length.

**obovate:** Inverted ovate; egg-shaped with the narrow end at the base.

**obovoid:** An ovoid body attached at the smaller end; inversely ovoid.

**obsolescent:** Nearly obsolete; becoming rudimentary or imperfectly developed.

**obsolete:** Not evident or apparent; rudimentary; imperfectly developed.

**obtectus, obtegens:** covered over, concealed

**obtuse:** Blunt; rounded at the tip

**ocellated:** Eyed; a circular spot of one color inside a larger spot or area of another color.

**occultans, occultus:** hiding, hidden  
**ochraceus:** ochre-yellow, yellowish-brown  
**odon-, odont-, odonto-:** toothed, tooth-,  
**odorata:** Odorous; fragrant.  
**-oecium:** -house, -room  
**offset:** A short lateral shoot that may produce another plant; an offshoot; a pup  
**-oideae:** Ending added to the stem of a subfamily within a plant family, i.e., *Bromelioideae*.  
**-oides:** Resembling; like.  
**oleaginous:** Fleshy and oily.  
**olens:** Odoriferous.  
**olig-:** Few.  
**oligantha:** Few-flowered.  
**oligotroph:** An organism adapted to grow in nutrient-deficient habitats. eg. some Tillandsias  
**olivaceous:** Olive green; resembling an olive.  
**ombrotrophy:** nutrition based on rainfall.  
**ontogeny:** the developmental history of an organism or one of its parts.  
**opaque:** Not transparent; dark; obtuse.  
**orbicular:** Having a rounded shape; circular.  
**orbicularis:** Disc-shaped; round.  
**order:** A group of related families or a single family when no affinity with other families at the same level is shown; a group between genus (tribe, suborder) and class.  
**organelle:** a subcellular body located in the cytoplasm - e.g., chloroplast, mitochondrion.  
**organogenesis:** The origin and development of organs in plants and animals.  
**orientalis:** eastern  
**ornate:** Most showy; adorned; embellished.  
**ornithophily:** Pollination by birds eg Many *Bromeliaceae*  
**orth-:** Straight; erect; upright.  
**-orum:** genitive plural. ending of s. II and adj. A. m. n. meaning 'of' For example *Echeveria Baileyorum* – of the Baileys, from Stearn's Bot Latin or *Bromeliaceae Aechmea amicorum, Hechtia gayorum*, etc  
**osmosis:** The tendency of water to diffuse through a semipermeable membrane, such as a cell wall, from a lower to a higher concentration of water.  
**osmotic potential (  $\pi$  ):** that component of water potential which is due to dissolved substances.  
**osmunda:** The fibrous roots of osmunda fern used as a growing medium for epiphytes.  
**-osus:** Abundance or marked development.  
**OTU:** From Wikipedia, the free encyclopedia .In phylogeny an operational taxonomic unit (OTU) is an operational definition of a species or group of species often used when only DNA sequence data is available. It is the most commonly used microbial diversity unit.  
The definition given by NCBI is:  
"Taxonomic level of sampling selected by the user to be used in a study, such as individuals, populations, species, genera, or bacterial strains."

The number of OTUs defined may be inflated due to errors in DNA sequencing.

**ovary:** The part of the pistil that contains the ovules or young seeds

**ovate:** With an outline like that of a hen's egg cut in two lengthwise, the broader end downward.

**ovoid:** Egg-shaped; the larger end toward the stem or axis.

**ovule:** The body in the ovary which after fertilization becomes the seed.

**oxy-:** sharp, sour, pointed

## P

**paleacea:** Covered with chaff; similar to the bracts in grass flowers.

**pallidiflora:** Pale-flowered.

**panicle:** A loosely arranged branched inflorescence blooming from the center on the lower branches to the outer ends or top.

**panicle with side branches 1<sup>st</sup> order** example *Tillandsia grandis*

**panicle with side branches up to 2<sup>nd</sup> order** example *Tillandsia extensa*

**paniculate:** An inflorescence that is compound; i.e., consisting of more than a single spike or branch

**paniculigera:** Bearing a panicle.

**pantropical:** Widely spread through the tropics.

**papillate:** Referring to an epidermal cell that forms a conical protuberance like a minute hair.

**papilliform:** Having the form of a small nipple.

**pappus:** the parachute type end to some seeds

**papyraceous:** Like paper; the consistency of papyrus.

**PAR:** Acronym for photosynthetically active radiation; that spectrum of light which is used in photosynthesis.

**parallel evolution:** the independent development of the same adaptive features in two or more lines of closely related organisms.

**parameter:** A measure or quantity fixed for a particular case but potentially variable in other cases.

**parasite:** A plant that grows and lives on another organism, deriving its sustenance from this organism. Was, at one time, linked to epiphytic Tillandsias

**paratype.** A specimen cited in the protologue that is neither the holotype nor an isotype, nor one of the syntypes if two or more specimens were simultaneously designated as types. These are often listed as representative specimens in the original description.

**parenchyma:** The fundamental (soft) cellular tissue of plants, as in the softer parts or leaves, the pith of stems, etc.

**parted:** Cleft or cut not quite to the base.

**parthenocarpy:** the development of a seedless fruit.

**partial:** Of secondary importance or rank.

**parviflorus:** Small-flowered.

**patent:** Expanded or spreading widely; an open habit of growth.

**pathogen:** A disease-producing organism.

**pathological:** Diseased.

**pathology:** The science dealing with diseases, their causes, results, and control.

**patronymic:** of an epithet, one involving a patronymic prefix eg Belgian “van”, Irish “O”, Scottish “Mac”, “Mc”, and “M” or suffix eg Icelandic “-dottir”, Russian “-vitch”, Danish “-sen”, English and Scandinavian “-son”

**patula:** Spread out; broad; flat.

**pauciflora:** Few-flowered.

**PBR:** see Plant Breeders’ rights

**peat:** Any mass of semi-carbonized vegetable tissue formed by partial decomposition in water of various plants, especially species of the moss *Sphagnum*.

**pectic compounds:** certain chemical substances, especially abundant in the middle lamella, that bind adjacent cells together.

**pectinata:** Shaped like a comb, with narrow parallel divisions or parts.

**pedalis:** a foot long ( about 30 cm)

**pedicel:** The support or stem of a single flower; stem of one flower in a cluster.

**pedicellate:** Having a pedicel

**peduncle:** Wrongly used for stem of a flower cluster. **should be** the name used for the stalk of the inflorescence - see notes under scape

**peduncle bracts:** bracts on the peduncle

**pellucid:** Wholly or partially transparent; clear.

**peltate:** Attached to its stalk inside the margin; peltate leaves are usually shield-shaped.

**pendent:** Hanging down from its support.

**pendula:** Hanging; pendulous.

**penduliflora:** Pendulous-flowered.

**pendulous:** Hanging or drooping.

**pentaploid:** a polyploid with five sets of chromosomes

**peregrinus:** foreign

**perennial:** Having a life cycle of more than two seasons.

**perfect:** Referring to a flower that has both stamens and pistils; i.e., both sexual organs

**perforation plates:** the walls at each end of a vessel element which are perforated by one or more openings.

**peri-:** Around.

**perianth:** The floral envelope taken as a whole, consisting of the calyx (sepals) and corolla (petals).

**pericarp:** The wall of the ripened ovary.

**periginous:** Referring to flower parts borne or arising from around the ovary .

**perlite:** A heat-expanded igneous glassy rock used in soil mixes to lighten them.

**permutate:** To change; to arrange in a different form.

**persistent:** Remaining attached; not falling off.

**petal:** One of the separate leaves of the corolla or inner portion of the perianth. In bromeliads there are three petals

**petaloid:** Petal-like; of color and shape resembling a petal. Often used for sepals and bracts.

**petal appendages or scales:** The tiny flaps of tissue present on the inner surface of each petal.

**petiole:** The stalk or stem of a leaf.

**petri dish:** A small shallow dish of thin glass with a loosely fitting, overlapping cover, used for seed culture.

**pH:** A measurement for the degree of acids or alkalis present. Expressed as the negative logarithm (base 10) of the concentration of hydrogen ions; pH = 7 is neutral, values below 7 are acid, and values above 7 are alkaline.

**phanerogams:** That division of the plant kingdom which produces flowers and seeds.

**phanerophleba:** Conspicuously veined.

**phase:** a distinct stage in the growth cycle of a plant

**phenology:** the relationship between an organism's activities and the seasonal calendar.

**phenotype:** the detectable expression of the interaction of genotype and environment; also, the visible characters of an organism.

**-philus:** -loving

**phloem:** A complex tissue that conducts food materials from the leaves down the stem.

**phorophytes:** Plants on which other plants grow epiphytically

**photoperiodism:** The response of a plant to the daily duration of daylight, correlated to seasonal changes.

**photosynthesis:** The process by which plants capture the sun's energy and convert it into chemical energy which they use in their metabolism.

**photosynthetically active radiation (PAR):** the 400-700 nm wavelength portion of the sun's radiant energy used by green plants to make food.

**phototropism:** Growth towards a light source

**phyllode:** A flat expanded petiole replacing the blade of a foliage leaf and fulfilling the same functions.

**Phyllody:** From Wikipedia, the free encyclopedia. Phyllody is the abnormal development of floral parts into leafy structures. It is generally caused by phytoplasma or virus infections, though it may also be because of environmental factors that result in an imbalance in plant hormones. Phyllody causes the affected plant to become partially or entirely sterile, as it is unable to normally produce flowers.

The condition is also known as phyllomorphy or frondescence; though the latter may sometimes refer more generically to foliage, leafiness, or the process of leaf growth.

Phyllody is usually differentiated from floral virescence, wherein the flowers merely turn green in color, but otherwise retain their normal structure. However, floral virescence and phyllody (along with witch's broom and other growth abnormalities), commonly occur together as symptoms of the same diseases. The term chloranthly is also often used for phyllody (particularly flowers exhibiting complete phyllody, such that it resembles leaf buds more than flowers), though in some cases it may refer to floral virescence.

**phyll-, -phyllus:** Referring to leaves; leaf.

**phyllotaxis:** the arrangement of leaves or bracts on a stem.

**phylogenetic:** Pertaining to the evolutionary history of an animal or vegetable type; the evolution of a genetically related group of organisms, as a species, family, or order.

**phylogeny:** Ancestral history of a kind as deduced from its component individuals.

**phylum:** A primary division of the animal or vegetable kingdom, so-called because the members are assumed to have a common descent.

**phytochrome:** a plant pigment, sensitive to red or far-red radiation, which mediates a number of light-dependent growth responses, including the germination of some seeds.

**phytophagous:** herbivorous.

**phytotelm:** As with many Bromeliaceae – leaves inflated at base and impounding water which is the home of many and various creatures.

**pictus:** Painted; ornamental.

**pineapple:** The popular name for *Ananas* the edible fruit.

**pine bark:** see also fir bark

**pinnate:** Formed like a feather, with the leaflets of a compound leaf placed on either side of the rachis. Sometimes used to describe the architecture of the fertile part of the inflorescence which is incorrect. See branch

**pioneer species:** an organism adapted to grow in recently disturbed habitats which are in the early stages of ecological succession.

**pipng:** describes when sometimes you get ridges or piping on the surface of leaves. Appears to be some genetic malfunction

**pisiformis:** pea-shaped

**pistil:** The ovule-bearing and seed-bearing organ. consisting of ovary, style, and stigma

**pistillate:** Of a flower having pistils and no stamens; female.

**pit:** a thin spot in the wall of a plant cell. Simple pits have parallel sides; bordered pits have overhanging sides.

**Pitcairnioideae:** One of the 8 subfamilies of the *Bromeliaceae*

**placenta:** The part in the ovary where the ovules are attached.

**Plant Breeders' Rights PBR:** also known as Plant Variety Rights (PVR) is an intellectual property right granted to the breeder of a new variety of plant

**plant patent:** a grant of right, available in certain countries, which provides a means of control over a new plant's propagation and sale for a given period

**plasma membrane:** the semipermeable membrane bounding the protoplast of a cell.

**plasmodesmata:** very thin strands of cytoplasmic material connecting the protoplasts of adjacent cells and linking them into a unified system known as the symplast.

**plasmolysis:** the separation of the cytoplasm from the wall of a cell due to the removal of water from its protoplast by osmosis.

**platy-:** Broad.

**platynema:** Wide thread, referring to the broad filament of the stamen.

**platyphylla:** With wide leaves.

**platystachys:** Wide spike.

**pleiotropy:** the capacity of a gene to affect a number of different phenotypic characters.

**-plenus:** Double or full.

**plicate:** Folded like a fan; marked with parallel ridges. Applied to the filament (stalks holding the stamens) when these are much folded.

**plumbeus:** leaden grey

**plumosa:** Like a plume; feathery.

**plumose:** With fine hairs; feather-like. Plumose-appendaged applies to seeds of the subfamily *Tillandsioideae* in which each seed has appendages of many fine, long hairs.

**pluvial:** Relative to the incidence of rainfall, especially when alternating with a comparatively dry period; also very rainy, as in pluvial forests.

**Poales:** The phylogeny order to which *Bromeliaceae* belongs with many other grasses

**pod:** A dehiscent fruit containing the seed.

**pogon:** beard

**polarity:** the characteristic of having differentiated ends - e. g., a water molecule with one partially positive end, the other partially negative, or a plant with a root end and a shoot end.

**polar nuclei:** haploid nuclei within the embryo sac which will fuse with one sperm to produce a polyploid endosperm nucleus.

**polita:** Polished.

**pollen:** Spores or grains borne by the anther containing the male element

**pollen (microscope) mother cell:** the diploid spore mother cell which will generate haploid pollen grains by meiosis. The pollen grain will develop into the male haplophase.

**pollen sacs:** the structures making up the anther which contain pollen mother cells and ultimately pollen grains.

**pollen tube:** an outgrowth from a germinating pollen grain which conveys the sperm down the style to an ovule.

**pollex:** thumb, length of first joint of thumb, 1 inch, (2.5 cm)

**pollination:** The mechanical or physical operation of transferring pollen from stamen to pistil.

**polster:** Cushion.

**poly-:** Numerous or many.

**polyantha:** Many flowered.

**polycarpy:** a condition in which individual shoots or whole plants flower and fruit repeatedly.

**polycephala:** Many headed.

**polyethylene:** A nearly transparent plastic material that can be used as a temporary greenhouse covering or as inside insulation.

**polygamous:** Bearing imperfect and hermaphrodite flowers on the same or on different plants of the same species.

**polymer:** a large molecule such as cellulose or a protein composed of linked smaller subunits.

**polymorphic:** Having or assuming several distinct forms: a variation within a species when involving the appearance of different forms.

**polypetalous:** Petals separate; not connected to each other.

**polyploid:** An organism with more than twice the basic chromosome number for the species.

**polystachia:** With many spikes.

**polystichous:** Arranged in several rows one above the other eg *Tillandsia pentasticha*; Rare in Bromeliaceae. See spirostichous

**porphyr-, porphyro-:** purple

**porraceus:** leek-green

**posterior:** Usually incorrectly applied to sepals as at or toward the back; opposite to the front; near or toward the main axis but **should be** adaxial, but inapplicable in long and/or twisted pedicels

**potsherd:** A piece or fragment of a broken earthen pot often used to increase drainage in a pot.

**poultry grit:** Finely crushed rock used by some growers in their potting mixture; sometimes used alone with added nutrients.

**prefix:** a letter or group of letters added before the stem of a word

**prickle:** A small and weak spine-like body borne irregularly on the outer surface of a plant.

**primary bract:** A structure at the base of each branch, present only in a compound inflorescence; often leaf-like but may be colored.

**primary wall:** the first thin wall layer laid down around a plant cell – the thicker secondary wall will develop on its inner surface.

**primitive:** Refers to the earliest form of a plant family.

**primordium:** The first recognizable, histologically undifferentiated stage in the development of an organ.

**princeps:** Of princely quality; distinguished.

**priority:** a prime principle of nomenclature whereby the earliest established name takes precedence over later names for the same taxon at a particular rank

**procerus:** Tall.

**prodigiosa:** Prodigious; great.

**producer:** a food-producing organism (autotroph) in an ecosystem.

**productivity:** the rate of biomass production by a plant or group of plants.

**prolatus:** lengthened, extended

**proliferation:** Producing offsets; growing by multiple division.

**prophase:** the initial stage of nuclear division, characterized by the condensation of chromatin into discrete chromosomes.

**prophyllate:** Having a bracteole.

**protandrous:** stamens mature before stigma

**protogynous:** having flowers in which pistils mature before stamens.

**protologue.** Everything associated with a name at its valid publication, i.e. description or diagnosis, illustrations, references, synonymy, geographical data, citation of specimens, discussion, and comments.

**protoplast:** a living cell minus its wall.

**prototype:** The ancestral form.

**provenance:** the known geographic origin of plants or seed, used mainly by foresters to describe worthwhile selections from indigenous populations

**proximal:** The part nearest the axis.

**pruinosa:** Covered with a fine white, frost-like powdery layer on bloom; excessively glaucous.

**pseudo-:** False; spurious.

**pseudobulb:** A thickened portion of a stem resembling a bulb but borne above the ground. See *Tillandsia bulbosa* etc but related more to orchids. Also refers to the hollow inflated bases of bromeliads.

**pseudoscaposus:** Having a false scape.

**pseudoviviparous:** having plantlets produced at the base and/or at the apex of the inflorescence or infructescence. See *Ananas* and *Tillandsia* etc

**psittacina:** Parrot-like.

**puberulent:** Somewhat or minutely pubescent with the hairs very fine and soft.

**pubescent:** Covered with short, soft hairs; downy.

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also Art. 29.3 and Rec. 29A.1) in an online publication with an International Standard Serial Number (ISSN) or an International Standard Book Number (ISBN)

Publication is necessary to create a new species or transfer to another genus

**pugioniformis:** dagger-shaped

**pulchella:** Pretty; beautiful.

**pulveratus, pulverulentus:** powdery

**pulvinata:** Cushioned; cushion-like.

**pulviniform:** In the form of a cushion.

**pumilus:** Dwarf; low growing.

**punctata:** Spotted; marked with dots.

**punctissima:** Minutely dotted; very spotted.

**punctulata:** Minutely dotted; spotted.

**pungent:** Piercing or sharp-pointed.

**pungens:** With a sharp, stiff point.

**punicea:** Crimson reddish-purple.

**pup:** An offset; an offshoot.

**pure:** Of a community, consisting of a particular species almost to the total exclusion of other species.

**purpureus:** Purple.

**pusilla:** Very small; insignificant.

**Puyoideae** One of the 8 subfamilies of the *Bromeliaceae*. Type *Puya*

**pyramidal:** Of conical shape; formed like a pyramid.

**pyramidalis:** Like a pyramid in shape.

## Q

**quadri-:** Four (quadricolor = four-colored.)

**quadripinnate:** refers to leaves not a branched inflorescence **better to use** panicle with side branches up to third order, thrice branched or 3 times branched

**quaquaversum:** on all sides, in all directions

**quilling:** A condition in certain thin-leaved bromeliads in which the center leaves form a tight tube, the leaves adhering to each other by means of a glutinous substance.

Sometimes due to lack of adequate moisture.

**quill-like:** More or less tapering; forming a tight, elongated shape.

**quinqu-, quinque- quinqui-:** five-

## R

**raceme:** A simple inflorescence in which the elongated axis bears flowers on short stems (pedicels) in succession toward the axis. Examples *Neoregelia carolinae*, *Aechmea racinae*, and even *Vriesea splendens* (check for pedicels!)

**racemiform:** In the shape of a raceme.

**racemose:** Having a raceme or growing in the form of one.

**racemosus:** With flowers borne in racemes; resembling a raceme.

**rachilla:** axis or rachis of a branch of an inflorescence  
**rachis (rhachis):** Axis bearing flowers or leaflets; the central elongated axis of an inflorescence  
**radians:** Radiating outward from a common center.  
**radiate:** Spreading from a common center.  
**radical:** Of or arising from the root or base of the stem.  
**radicle:** The lower part of the embryo below the cotyledons; the primary root.  
**rainforest:** A moist, wet, closed plant community dominated by a canopy of dense lianas and epiphytes and a lower assemblage of smaller trees, shrubs, herbs, and ferns.  
**ramosa:** Branched.  
**ramulus:** A secondary or tertiary branch.  
**ranks:** Rows, as the arrangement of flowers on an inflorescence.  
**raphides:** Needle-like crystals, usually of calcium oxalate, which occur in the cells of many plants.  
**rariflora:** Few-flowered.  
**receptacle:** that part of the floral axis which bears the floral appendages.  
**recessive allele:** a form of a gene which, when present in an organism with a dominant allele, will fail to express itself in the phenotype.  
**reciprocal cross:** A repeat of a cross in which the original roles of the male and female parents are reversed.  
**reclinata:** Bent backward; reclining.  
**recombinants:** chromosomes, gametes, cells or organisms bearing gene combinations unlike those of the parents.  
**recondite:** Concealed; difficult to make out; not easily recognized.  
**rectiflora:** With upright flowers.  
**recumbent:** Leaning or reposing on the ground.  
**recurvata:** With recurved leaves.  
**recurved:** Bent or curved downward or backward.  
**reduction division:** another name for meiosis.  
**reduncate:** Turned or bending backwardly.  
**reflexed:** Abruptly recurved or bent downward or backward.  
**regalis:** Regal; royal.  
**regeneration:** The ability of an organism to repair or replace a part lost or removed to produce again a whole individual.  
**regina:** Of the queen; queenly.  
**registration:** Making a record; i.e., the recording of the name and parentage of a new bromeliad hybrid according to the rules of the ICNCP as interpreted by the Registrar of the Bromeliad Society International.  
**registered trademark :** see Trademark  
**regression:** The tendency of the progeny to revert back to the condition typical of the species. regular: Uniform or symmetrical in shape or structure.  
**regular flowers:** Flowers with the parts in each series or set alike; as stamens all like each other; petals all like each other.  
**remote:** Separated by spaces longer than common; scattered  
**remotiflora:** Flowers widely separated.  
**reniform:** Kidney-shaped.

**repand:** Having a wavy surface or margin; undulate.  
**repent:** Creeping; prostrate; rooting at the nodes.  
**replicate:** Doubled-back; folded.  
**respiration:** an intracellular process involving the oxidation of food for the production of energy.  
**resupinate:** Turned completely around so as to appear upside down.  
**reticulate:** In the form of a network; having veins, fibers, or lines crossing like those on a leaf.  
**retorta:** Twisted back.  
**retroflexa:** Bent backward; reflexed.  
**retorse:** Directed backwards or bent back; retroverse.  
**retuse:** Having the apex rounded or obtuse, with a slight notch, as a leaf.  
**reverse osmosis:** the extrusion of water across a semipermeable membrane from an area of higher osmotic potential  $\pi$  to one of lower  $\pi$  by application of sufficient mechanical pressure  $P$  to nullify the effects of the differential in  $\pi$  .  
**reversion:** A change backward to an earlier condition.  
**revoluta:** Rolled backward from the margin or apex.  
**revolute:** Rolled backward or downward, as the margins or tips of some leaves.  
**rhachis:** See rachis.  
**rhizomatous:** With underground stem.  
**rhizome:** An underground root-bearing stem, the apex of which progressively sends up leafy shoots.  
**rhodo-:** rose, rosy-red  
**rhombic:** Shaped like a top; an oblique-angled equilateral figure.  
**ribbing:** a term given to intermittent raised longitudinal ribs on leaves generally seen in the spineless *Aechmea fasciata*  
**ribonucleic acid (RNA):** a type of nucleic acid synthesized on a DNA template, differing from DNA in the nature of its constituent sugar (ribose rather than deoxyribose).  
**ribosome:** a small body composed of protein and RNA, located on the endoplasmic reticulum of a cell, on whose surface protein synthesis takes place.  
**ridging:** describes when sometimes you get ridges or piping on the surface of leaves. Appears to be some genetic malfunction  
**rigida:** Stiff; unbending; rigid.  
**ring cells:** a circular arrangement of cells located between the four central cells and the wing of a tillandsioid trichome.  
**ringens:** Gaping; open-mouthed.  
**riparia:** Of or located on the bank of a river.  
**rivalis:** pertaining to brooks  
**robustus:** Of sturdy habit.  
**rogue:** Referring to a progeny displaying features not normal to the average rosette: A circular cluster of leaves radiating from a crown or very short internode.  
**root cap:** a mantle of parenchyma cells covering the apex of a root.  
**root hair:** a hair-like extension of a single root epidermal cell, serving to increase the absorbing surface area of the root.  
**rosette:** a short stem bearing numerous, closely associated, leaves; adjective, rosulate.  
**roseum:** Rose-colored; delicate pink.

**rostrate:** Having a beak.  
**rostratus:** Having a projection like the beak of a bird.  
**rosulate:** In the form of a rosette.  
**rub-, rube-, rubr-, rubri-:** Referring to the color red.  
**rubig:** Referring to rust color.  
**rudimentary:** Arrested in an early stage of development.  
**rufescent:** Reddish or bronze in color.  
**rufus:** Reddish.  
**rugose:** Wrinkled; having the veinlets sunken and the spaces between elevated. **rugulose:** Finely wrinkled.  
**runner:** A slender stolon-like stem rooting at the apex and producing a new plant.  
**rupestris:** Growing in rocky places; rock-loving.  
**rupicolous:** Living among or growing on rocks.  
**rutilans:** Becoming reddish in color, red with yellow admixture.

## S

**S<sub>1</sub> Hybrid:** see synthetic hybrid  
**saccate:** Forming a pouch or sac.  
**sacciform:** Bag-shaped; sac-shaped.  
**sagenarius:** Like a fishnet.  
**sagittata:** Shaped like an arrowhead, with the basal lobes directed downward.  
**saline:** salty.  
**sanguinea:** Blood-red; bloody.  
**sanguinolenta:** Bloody; having blood-red spots.  
**sarmentosa:** Bearing runners; producing slender prostrate branches.  
**sativa:** Sown; cultivated.  
**savanna:** An open grassy prairie with brush or scattered trees.  
**saxatilis:** Found among the rocks.  
**saxicola:** Growing on rocks.  
**scabrous:** Rough; feeling roughish or gritty to the touch.  
**scale:** Minute absorbing trichomes or hairs through which many bromeliads obtain their water and nutrients. Also, one of a number of kinds of minute sucking insects that attack bromeliads, the adult scales being flattened, disk-like, and immobile.  
**scalloped:** With rounded teeth.  
**scandent:** Climbing.  
**scalaris:** Ladder-like.  
**scape:** wrongly said to be the stem of the inflorescence usually extending beyond the leaves. It may bear bracts but no foliage leaves and may be one or many flowered. In reality refers to a leafless peduncle as in Amaryllidaceae. **Better to use peduncle**  
**scape bracts:** wrongly said to be the structures borne on the scape; may be leaf-like or colored. **Better to use peduncle bracts**  
**scapose:** Bearing or resembling a scape.  
**scaposus:** Bearing or resembling a scape.  
**scariosa:** Thin; dry; membranous in texture.  
**scent:** see smell

**sceptriformis:** In the shape of a wand or scepter .

**sciophyte:** A plant adapted to conditions of constant shade.

**scleireid:** a type of sclerified cell which tends to be spherical in shape.

**sclerenchyma:** is the supporting tissue in plants. Two types of sclerenchyma cells exist: fibres and sclereids. Their walls consist of cellulose, hemicellulose and lignin. Sclerenchyma cells are the principal, supporting cells in plant tissues that have ceased elongation. Sclerenchyma fibres are of great economical importance, since they constitute the source material for many fabrics (flax, hemp, jute, ramie).

**sclerified:** having thick, lignified cell walls.

**scleroid:** Of hard texture.

**scorpioid:** Said of a cluster in which the flowers are two-ranked and borne alternately at the right and the left.

**scurf:** The hairs of an epidermis when stellate or scale-like.

**secund:** One-sided; borne along one side of an axis

**secunda:** Side-flowering.

**seed:** The ripened ovule, consisting of the embryo and its covering with a supply of food.

**seedling:** A young plant raised from seed usually from the time it produces its first leaves and roots until it reaches maturity.

**seed pod:** The fruit of the ripened ovary after fertilization.

**segment:** One of the parts of a leaf, petal, calyx or perianth that is divided but not definitely compound.

**segregation:** the separation of pairs of homologous chromosomes and their alleles into different daughter cells during meiosis.

**selection:** In agriculture, breeding through the selection of parents with outstanding characteristics for the type, particularly in the development of so-called "improved species".

**self:** To pollinate a flower by its own pollen or by pollen from another flower of the same plant. self-fertilization: The transference of pollen from an anther to the stigma of the same flower.

**self-incompatibility:** a genetically based phenomenon which prevents self-fertilization.

**semen:** seed

**semi-:** Half.

**semipermeable membrane:** a membrane which is permeable to small molecules such as water but not to certain larger molecules or ions.

**sensu:** Always means a wrong interpretation of the Type or including more than one species under the one single name

**sensu lato:** in the broad sense

**sensu stricto:** in the narrow sense

**sepal:** One of the separate parts of a calyx; the flower parts that surround or contain the petals. In bromeliads there are three sepals

**sepaloid:** Resembling a sepal.

**septate:** Partitioned; divided by partitions.

**septem:** seven

**septentrionalis, septemtrionalis:** north, northern

**septicidal:** Dehiscence along or in partitions, not directly into the locule.

**septum:** Any dividing wall or partition.

**serra:** Saw-edged.

**serrata, serrate:** Toothed like a saw; having sharp teeth pointing forward

**serrulate:** Finely serrate or saw-edged.

**sesqui:** one and a half

**sessile:** Attached directly at the base; not stalked. Flower rests directly on the stem

**sessiliflora:** With a flower having no stalk.

**seta:** A bristle.

**setacea:** Bristle-like or bristle-shaped.

**setaceous:** Bristle-like; of a surface covered with bristle-like hair.

**setiform:** Like a bristle.

**setigera:** Bristly; bristle-bearing.

**setose:** Bristly; setaceous.

**sex:** six

**sexual asynchrony:** the maturation of female and male appendages in the same flower at different times, producing the protogynous or protandrous condition.

**sheath:** Harris says 'The portion of an organ which surrounds at least partly another organ, as the leaf base surrounds the stem.' In Bromeliaceae it is a common term for the base of a leaf but can also refer to the base of say, a peduncle bract .

**shield:** the plate of dead cells attached to the top of the stalk of a peltate trichome.

**shoot:** A new growth arising from the root of the old plant.

**short-day plant:** a plant which flowers when subjected to a day length shorter than some maximum.

**siccatus:** dried, generally applied to herbarium specimens

**sieve plate:** the perforated areas at each end of a sieve tube element.

**sieve tube:** an interconnected series of sieve tube elements.

**sieve tube element:** the individual food-conducting cell making up the sieve tubes of phloem tissue.

**sigmoid:** S-shaped; curved in two directions.

**silvestris:** Growing in woods.

**simple:** Of one piece; not compound; a single unbranched inflorescence; an inflorescence with a single flower spike.

**simplex:** Unbranched; undivided; simple.

**simulans:** Resembling; similar to.

**simulator:** That which assumes the appearance of another.

**sink:** a part of the plant where more food is required than that region can produce.

**sinuate:** Wavy; having leaves with wavy margins or with strong indentation; sinuous.

**sinus:** recess, rounded inward curve between two projecting lobes

**slow release fertilizer:** A chemical, in pellet form, placed in the growing medium and exuding nutrients over a period of time.

**smaragdinus:** emerald-green, dark bluish-green

**smell, scent, odour, fragrance:** Smell, like taste, is a chemical sense detected by sensory cells called chemoreceptors. When an odorant stimulates the chemoreceptors in the nose that detect smell, they pass on electrical impulses to the brain. The brain then interprets patterns in electrical activity as specific odors and olfactory sensation becomes perception - something we can recognize as smell. It is a fascinating frontier in neuroscience. Some species of Bromeliad flowers do have scent which is there for

pollinators but sometimes humans can detect this scent. As an example Walter Till referred to this in his thesis on 'Diaphoranthema' but generally this factor has not been specifically mentioned in protologues.

**smooth:** A surface devoid of hair; not rough.

**socialis:** Forming colonies.

**solitary:** Borne singly or alone, as a solitary flower.

**solute:** the dissolved substance-gas, solid or liquid-in a solution.

**solvation:** the process whereby a solute is dissolved.

**solvent:** the medium in which a substance is dissolved.

**sordid:** Dull-colored; dirty .

**source:** that part of a plant which exports food to regions where it is required (sinks).

**spanish moss:** *Tillandsia usneoides*

**sparse:** Scattered distribution; occurring in a number of unconnected localities.

**spathacea:** Provided with a spathe.

**spathe:** A large, stiff, leathery bract or pair of bracts subtending or enclosing an inflorescence. spatulate: Shaped like a spatula; in the form of a spoon.

**spatial niche:** the space occupied by a species.

**speciation:** The evolutionary process by which species are formed; the process by which variations become fixed.

**species:** Only one word is allowed. If more than one word they should be joined up with a hyphen. A unit in classification; a group of organisms that have in common one or more characteristics which definitely separate it from any other group.

**specific:** Of or pertaining to a certain species.

**specific heat:** the thermal energy required to raise the temperature of one gram of a substance one degree Celsius.

**specimen:** An individual exemplifying a group; a specimen plant is one that is a noteworthy example of cultivation to an unusually high degree.

**speciosa:** Handsome; showy; fair.

**spectabilis:** Spectacular; deserving notice because of its intrinsic worth; showy .

**sperm:** a male gamete.

**sphacelata:** Dead; withered.

**sphaerocephala:** With a globose head.

**sphaerica:** Spherical.

**sphagnum:** A soft moss of the genus *Sphagnum* found chiefly on the surface of bogs; used dried or alive in potting.

**spheroidal:** A solid that is nearly spherical.

**spicate:** Having the form of spikes.

**spiciform:** In the form of a spike.

**spiculosa:** Covered with fine, fleshy, erect points.

**spike:** An unbranched inflorescence with stalkless (sessile) flowers. Examples *Tillandsia xiphioides*, *Aechmea gamosepala*

**spindle-shaped:** Fusiform; widest at the middle and tapering both ways.

**spindle apparatus:** a group of microtubules which extend from the centromere regions of the chromosomes to opposite poles of a dividing cell

**spine:** A sharp-pointed hard or woody outgrowth on a plant.

**spinescent:** A leaf terminating in a spine-like point; more or less spiny.

**spinose:** Bearing spines or thorns.

**spinulosa:** Having small spines; spinulose.

**spiralis:** Having flower or leaf insertion, arranged in a spiral.

**spirostichous:** leaf or flower arrangement when inserted spirally. Much more common than polystichous in Bromeliaceae. Probably better to state as spirally arranged

**splendens:** Splendid; outstanding; brilliant.

**sporadic:** Scattered; of a distribution when not continuous.

**spore:** A simple reproductive body; usually composed of a single detached cell and containing no embryo.

**sport:** an apparent mutation which has occurred on part of a plant (Comment - eg variegated offset)

**spp:** Abbreviation for the plural of species.

**sprawling:** Leaning upon or lying on the ground or some object.

**spreading:** Of a structure when extending outwardly or transversely.

**spur:** An elongated structure that may be part of a petal or sepal.

**squami-:** Scale; hence, covered by scales.

**squamosa:** Full of scales.

**squarrosus:** Covered with scurf, with parts spreading or recurved at ends.

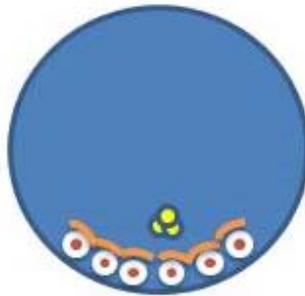
**ssp:** Abbreviation for subspecies.

**-stachys:** Spike.

**stalk:** The supporting stem of an organ, such as petiole, peduncle, pedicel, filament, or stipe.

**stamen:** The pollen-bearing male organ of a flower. In bromeliads there are usually six stamens consisting of the anther at the top supported by a special stalk called a filament.

**Stamens in flag-blossom position**



**staminate:** Having stamens and no pistils; male.

**staminea:** Bearing prominent stamens.

**staminode:** A sterile or abortive stamen without an anther. See *Hechtia* for example

**Standard:** According to the ICNCP this is; a specimen, seed sample or illustration kept and maintained to demonstrate the diagnostic characteristics of a cultivar.

**status novus** (stat. nov.). Assignment of a taxon to a different rank within the taxonomic hierarchy, e.g. when an infraspecific taxon is raised to the rank of species or the inverse change occurs .

**stele:** the central cylinder of vascular tissues derived from the apical meristem of a stem or root.

**stellate:** Resembling a star; star-like.

**stem:** The main axis of a plant; the leaf-bearing and flower-bearing as distinguished from the root-bearing axis. see Fig 6

**stemflow:** the fluid which washes down the trunks of trees during rain-storms.

**steno-:** Narrow.

**stenophylla:** With narrow leaves.

**stenostachya:** With narrow spikes.

**stenotopic:** The distribution of a species within a restricted geographic range.

**sterile:** Barren; imperfect. A sterile flower is one without pistils.

**stict-, sticto- :** spotted, dotted

**stigma:** The top of the female portion of a flower that receives pollen from the anther.

See separate file for types of stigma.

**stigmatic:** Pertaining to the stigma.

**stipe:** In general, a supporting structure or stalk. Specifically the sterile part of the branch of a panicle.

**stipitate:** Having, or borne on, a stipe.

**stolon:** A shoot that bends to the ground and takes root; more commonly, a horizontal stem at or below the surface of the ground that gives rise to a new plant at its tip.

**stoloniferous:** Sending out or propagating itself by runners or stolons which are disposed to root.

**stoloniform:** In the shape of a stolon.

**stoma, pl. stomata:** Any of various small apertures, especially a minute orifice in the leaves; a breathing pore.

**stramineous:** Straw-like in texture; straw-colored.

**strepto-:** Twisted.

**streptocarpa:** With twisted fruit.

**streptophylla:** With twisted leaves.

**striata:** A form of variegation - striped; marked with longitudinal lines.

**strict:** Rigidly upright.

**stricta:** Upright; erect; very straight.

**strigillose:** With short straight and stiff hairs or bristles.

**strigose:** Bearing appressed, stiff, short hairs.

**strobilacea:** Resembling a cone, formed of overlapping scales like a pinecone.

**strobile:** An inflorescence with imbricate scales like a cone.

**strobilate:** In the shape of a cone; conical in form.

**strobiliform:** In the shape of a cone.

**stroma:** the liquid matrix within a chloroplast where many of the enzymes involved in photosynthesis are located.

**style:** The elongated part of the pistil between the ovary and the stigma

**suaveolens:** fragrant, sweet smelling

**sub-:** Somewhat; slightly; or rather. Also, below or almost.

**subcoriaceous:** Somewhat leathery in texture.

**subcorymb inflorescence:** Somewhat flattened

**suberect:** Nearly or almost upright.

**subfamily:** There are 8 subfamilies of *Bromeliaceae*

**subgenus:** One of the divisions into which large genera are sometimes taxonomically divided.

**suborbicular:** Almost circular.

**sessile:** Almost stalkless.

**subsidiary cells:** specialized epidermal cells forming part of the stomatal apparatus, located adjacent to the guard cells.

**subspecies:** A category below the level of a species: a group within a species united by geographic or ecologic distinction. Often used as a synonym of variety. Sometimes used as a higher ranking than variety

**stratum:** The medium upon which a plant or germinating seed grows.

**subtended:** Enclosed or embraced in its axil.

**subterete:** Somewhat or imperfectly terete.

**subulate:** Slender; more or less cylindrical and tapering to a point.

**subulifera:** With a fine, sharp point; awl-shaped.

**succineus:** amber-coloured

**succulent:** Juicy; fleshy; soft and thickened in texture.

**sucker:** A shoot arising from the roots or beneath the surface of the ground.

**suffix:** a letter or group of letters added after the stem of a word

**sulcate:** Grooved or furrowed lengthwise.

**sun plant:** heliophile.

**superba:** Very showy; excellent; splendid.

**superior:** Growing or placed above another organ; said of an ovary that is free from the perianth; standing above the sepals and petals.

**supinate:** Leaning backwards.

**sursum:** upwards, from below

**symbiotic:** Referring to the living together of two dissimilar organisms in a mutually beneficial relationship.

**symmetrical:** Said of a flower which is regular as to the number of parts and their arrangement in the perianth. Also shapes as in sepals

**sympatric:** used of related taxa occurring within the same area, having overlapping ranges

**sympetalous:** Gamopetalous; petals more or less united.

**symplast:** the interconnected protoplasts of the cells making up a tissue of the entire plant body

**sympodial:** A form of growth in which each new shoot, springing from the rhizome of the previous growth, is complete in itself and terminates in a potential inflorescence.

**syncarp:** United carpels; a fruit consisting of many cohering or consolidated carpels. eg. Pineapple

**synergid cells:** those cells in the embryo sac (female haplophase) which flank the egg.

**synoecius:** having male and female flowers or organs mixed together in the same inflorescence, see *Hechtia gayorum*

**synonym.** A name considered to apply to the same taxon as the accepted name .

**synonymising:** is not a true nomenclatoric matter but a taxonomic judgement ( Walter Till)

**synsepalous:** With sepals more or less united; gamosepalous.

**synthetic hybrid:** a plant-breeding term for the result of open pollination within a number of defined, controlled lines

**syntype.** Any specimen cited in the protologue when there is no holotype, or any of two or more specimens simultaneously designated as types .

**systemic:** A type of biocide which, when applied to the plant, is dispersed throughout the entire plant and makes it lethal to certain insects, such as aphids, scale, and mealy bug.

## T

**tableland:** A plateau; sometimes restricted to one whose slope is steep and cliff-like and rises from the surrounding terrain in bold relief.

**tabuliformis:** Having a flat surface; table-like.

**tapering:** Gradually becoming smaller or diminishing in diameter or width toward one end.

**tautonym:** a species or cultivar epithet that repeats the name of the genus to which it is assigned; not accepted under (ICBN Art 23.4) or (ICNCP Art 21.22)

**taxon:** A group of organisms sharing a relationship that may be assigned to one of the categories of a classification, such as family, genus or species (pl. taxa).

**taxonomy:** Consists of identification, classification and naming (nomenclature)

**tectorum:** Of roofs or houses.

**telophase:** the stage of nuclear division in which the two sets of daughter chromosomes form up into daughter nuclei at opposite poles of the mother cell.

**tenebrosus:** dark, gloomy

**tension:** the negative pressure which is required to draw water from the environment and through the plant body.

**tenuispica:** Slender spike.

**tenuifolia:** Finely leaved; with slender leaves.

**teratological:** Monstrous; abnormal; malformed.

**terete:** Circular in transverse section; imperfectly cylindrical because the object may taper both ways.

**terminal:** Apical; produced at one end; usually indicating the placement of structures at one end.

**terminology:** The system of terms dealing with a given science or subject.

**ternate:** In threes; of leaves when arising in threes from the same node.

**terrestrial:** Growing in the ground and supported by soil as opposed to growing in trees or water.

**tessellata:** Arranged in a checkered or mosaic pattern.

**testa:** Seed coat

**testudo:** A turtle.

**tetrantha:** Four-flowered.

**tetraploid:** A condition of, or an organism having, four sets of chromosomes or twice the normal number.

**Thesis:** a dissertation generally linked to a doctorate, normally these are not published as such. See also Publication

**thigmotropism:** movement or growth in response to a tactile stimulus

**throughfall:** the water passing through the canopy of a forest (exclusive of stemflow) when rain falls

**thylakoid:** a flat, sack-like membranous subunit of the chloroplast

**thyrs:** Referring to a flower cluster.

**thyrs:** A compact, more or less compound panicle; more correctly a panicle-like cluster with the main axis indeterminate. Can be ovoid-pyramidal or cylindrical. Lilac is a good example. Should not be encountered in *Bromeliaceae* but sometimes used to 'define' shape of an inflorescence. See App 2

**thyrsiflora:** A compact clustered panicle.

**tigrina:** With tiger-like markings.

**Tillandsioideae:** One of the 8 subfamilies of the *Bromeliaceae*

**tissue:** A fundamental structural unit of an organ; an aggregation of cells with a specific function.

**tissue culture:** The propagation of new plants by using shoot tips or meristems as a means of formation of new shoots.

**tomentose:** A dense, woolly covering; short hairs matted in appearance.

**tomentulose:** Somewhat or delicately tomentose.

**tomentum:** Pubescence; composed of densely matted woolly hairs.

**tonoplast:** the membrane bounding the vacuole of a cell.

**topophytic cultivar:** a clone with the same genotype as its original parent plant but differing in its phenotype due to it being originally asexually propagated from specific tissue on the parent plant (ICNCP Art 2.6)

**topotype:** Not officially accepted in the ICBN but used to denote a specimen collected from the same location the original holotype material was collected.

**topovariant:** a distinguishable group of plants grown from seed from a given provenance (ICNCP Art 2.13)

**tortuous:** Twisted, with irregular bending and twining.

**tracheid:** a primitive water-conducting cell of the xylem tissue

**trade designation:** a device that is used to market a plant when the original name is considered unsuitable for marketing purposes (ICNCP Art 13.1)

**trademark (™):** any sign, usually made from words, letters, numbers, or other devices such as logotypes, that individualizes the goods of a given enterprise and distinguishes them from goods of its competitors

**transcription:** the process by which genetic information contained in a DNA molecule is incorporated into the nucleotide sequence of a messenger-RNA molecule

**transfer-RNA (t-RNA):** the small RNA molecules which convey specific amino acids to the ribosomes during protein synthesis

**translation:** the process whereby the codon sequence along a messenger-RNA molecule is translated into the amino acid sequence of a protein.

**translocation:** 1. the movement of substances within a plant; 2. the movement of a piece of a chromosome to a new position via breakage and refusion to the same or another chromosome.

**translucent:** Partially transparent to light.

**transpiration:** The act or process of exhaling water vapor from the stomata of plants.

**transverse:** At right angles to an axis; broader than long in a cross-wise direction.

**trapeziform:** An unsymmetrical four-sided figure; with four unequal sides.

**tree fern:** Large tropical ferns whose fibrous trunk is used as a potting medium for epiphytes. Used shredded, as logs, or as slabs.

**tri-:** Three or three times.

**tribe:** A taxonomic category at a level below a family and above a genus: a taxonomic group within a family sharing a relationship among certain of its genera.

**tricholepis:** With hairy scales.

**trichome:** The scale or hair found on the leaves and other organs of most bromeliads; an absorptive organ – see Fig 8

**tricophylla:** Hairy leaved.

**trihybrid cross:** a cross between two organisms which bear different alleles for three distinct genes.

**trinomial:** A scientific name for an infraspecific rank; i.e., having three elements-- generic name, specific epithet, and infraspecific epithet. The latter follows a rank qualifier such as ssp. or var.

**trioecious:** covers *Catopsis* species that have both homoecious and dioecious populations.

**tripinnate:** refers to leaves not a three branched inflorescence **better to use** panicle with side branches up to second order, twice branched

**triploid:** A condition of, or an organism having, one extra set of chromosomes in its genetic constitution. as such it is sterile

**tristis:** Sad; dull; dull-colored.

**triticina:** Having a wheat-like appearance.

**trophic pyramid:** an arrangement in a vertical series of the classes of organisms in an ecosystem, according to their mode of nutrition - the autotrophs are at the base and the terminal predators at the top.

**tropism:** The tendency of an organism to respond to the influence of an environmental factor, such as light, with a great intensity in a direction which may be positive or negative to the site of the stimulus.

**truncate:** Appearing as if cut off at the end; abruptly terminated; the end nearly or quite straight across.

**tube:** The cylindrical shape of some bromeliads, such as billbergias, caused by overlapping of leaf bases and an erect growth habit.

**tube nucleus:** the nucleus which mediates the growth of the pollen tube.

**tubercle:** A rounded protruding body or nodule.

**tuberous:** With the nature or appearance of a tuber.

**tufa:** A porous limestone rock that can be used for mounting bromeliads.

**tufted:** Stems in a close cluster: having a cluster of hairs.

**tumid:** Swollen.

**turgid:** Swollen; full of moisture.

**turgor pressure:** the pressure within a cell generated by movement of water into that cell.

**twining:** Rising by coiling around a support.

**type form:** The originally collected plant from which a botanical description is written.

**typical:** Relative to the aggregate of characteristics shared by a large number of individuals of a particular group.

## U

**ubiquitous:** Growing in all kinds of habitats; of widespread occurrence.

**-ulentus:** Abundance; full or marked development.

**umbel:** An inflorescence in which the pedicels or peduncles of a cluster spring from the same point on the flower axis; resembling the framework of an umbrella.

**umbellet:** A small or secondary umbel in a compound umbel

**umbrinus:** Brown; umber.

**umlaut:** two dots placed over a vowel to indicate a difference in its pronunciation of the vowel. It is a specific example of a diacritical mark (q.v.) and should not be confused with a diaeresis (q.v.)

**unarmed:** Without thorns, spines, or barbs.

**uncinate:** Hooked near the apex, as in "uncinate teeth," on leaf margins of some species of the subfamily *Bromelioideae*.

**undulate:** Wavy; with a wavy margin or surface.

**unguicularis:** ½ inch (1.3 cm) long

**unguiculate:** Contracted into a claw-like structure.

**uni-:** One; single.

**unicornis:** One-horned.

**unilateralis:** Unilateral; one-sided.

**uniseriate:** Arranged in one row or series.

**unisexual:** Refers to flowers having only stamens or pistils; those flowers of one sex only.

**uni-utriculate;** fascicles concentrated in the central part of the inflorescence

**UPOV:** the acronym for the Union Internationale pour la Protection des Obtentions Vegetales ( the International Union for the Protection of New Varieties of Plants), the international body charged with overseeing the administration of Plant Breeders' Rights

**urceolate:** Urn-shaped; ovoid but contracted at or near the mouth like an urn.

**usneoides:** Resembling a lichen of the genus *Usnea*.

**utricularia:** A small sac or bladder.

## V

**vacuole:** A small cavity or space in the tissues or cells of an organism containing air or fluid.

**vagans:** Wandering; of wide distribution.

**vaginate:** Provided with or surrounded by a sheath.

**valvate:** Opening or pertaining to valves; meeting at the edges without overlapping, as leaves or petals in a bud,

**valve:** A separable part of a dry fruit; the units or pieces into which a capsule splits or divides indehiscing.

**variabilis:** Variable in form or color.

**variant:** An individual or species departing in some characteristic from the mean characteristics shared by that group.

**variation:** The character differences of an individual or group of individuals as a result of genetic modifications or in response to an environmental factor, or a combination of both.

**variegata:** Irregularly colored or blotched; but in Bromeliaceae generally accepted as longitudinally striped.

**variegated:** same as above. A non-Latin term used in Cultivars – see J Brom Soc 55(4): 189. 2005. Bromeliaceae are monocots and generally speaking variegation occurs as longitudinal lines which can be any color and any width that contrasts with the normal leaf color

**variegation:** The condition of a leaf when certain sections are reduced or totally devoid of green pigments with the result that the leaf has pale stripes, blotches, or bands. Note from Uwe Scharf -Variegations are malfunctions. A part of the tissue is unable to produce the green chlorophyll. This malfunction is caused by a somatic mutation which makes the plant a chimaera - an organism with two different sets of DNA. Depending on the concerning layer within the plumula (bud), on the leaf the deviation appears as "striata", "albomarginata", "mediopicta", or "variegata". As the malfunction (mostly) doesn't affect the ovary, this set of information is not transferred to the next generation - or, the progeny is unable to survive after germination.

**variety:** A plant having slight but distinct differences that distinguish it from the type species; a botanical variety as opposed to a cultivar, which is a horticultural variety.

**vascular:** With vessels or ducts, or relating to them.

**vascular bundle:** An elongated group of cells specialized for conduction and for support.

**vascular cambium:** the lateral meristem located along the roots and stems of many plants, responsible for increasing their girth – absent or weakly developed in most monocots.

**vegetative:** The part of the plant not directly concerned with reproduction, such as the stem and the leaves.

**vegetative reproduction:** In *Bromeliaceae*, the increasing of a plant population through offshoots; also through various meristemic cultural techniques.

**vein:** see nerve

**velamen:** A membrane or sheath; the thick, spongy epidermis covering the roots of certain epiphytes.

**velutina:** Velvety; soft.

**venose:** With several prominent veins.

**ventricose:** Distended; swelling on one side; unevenly inflated.

**venusta:** Beautiful; graceful; charming.

**ventrical:** Towards the belly; opposite of dorsal.

**vermiculite:** A laminated heat-expanded hydrated silicate used in horticulture to lighten soil mixes and retain moisture.

**vernal:** Occurring in the spring.

**vernation:** The arrangement of veins within a leaf or leaf-like part.

**verniosa:** Varnished; shiny as though varnished.

**verrucosa:** Covered with wart-like protuberances.

**vertic:** Referring to a whorl.

**verticil:** A whorl of foliar organs, flowers, or inflorescences about the same point on the axis.

**vessel:** a superposed series of vessel elements located in the xylem tissue.

**vessel element:** an advanced type of xylem vascular cell.

**vestigial:** Reduced to a vestige of a part once more developed.

**vestite:** Clothed; covered with soft hairs.

**viability:** The possibility for growth; capability of development, as in the germination of seed.

**villose:** Provided with long, soft hairs; shaggy .

**viminalis:** Like wicker-work; having long flexible shoots.

**vinosa:** Wine-red in color.

**violacea:** Violet-colored.

**vires-:** Referring to the color green.

**viridiflora:** Green-flowered.

**virginalis:** Pure white; virginal.

**virus:** A sub-microscopic particle that causes disease.

**viscid:** Sticky, glutinous.

**vitro:** Glass; usually referring to plant capture under glass or in a flask.

**vittata:** Marked with longitudinal stripes; but generally in Bromeliad terms, banded.

**viviparous:** Germinating while still attached to the parent plant; proliferous. Does not occur in Bromeliaceae. See **pseudoviviparous**

**volubilis:** Turning; twining.

**volute:** Rolled up.

**voucher specimen:** a nominated specimen representing the plant or taxon mentioned in a text or one that is complementary to material specially preserved for studying DNA, cytology, pollen etc

**vulgaris:** Common; ordinary

## W

**warm house:** A greenhouse for tropical plants, with a minimum night temperature of 60° F .

**washout:** the atmospheric particulates and solutes brought to the earth's surface by rainfall.

**water potential  $\psi$  :** a measure of the free energy status of water which determines the direction of water movement in the plant body from areas with higher to those with lower  $\psi$  's.

**water use efficiency (WUE):** a mathematical index of a plant's efficiency when it expends water to accumulate dry matter, expressed as the weight of dry matter produced per unit time per unit weight of water used.

**water vapor pressure (WVP):** the pressure exerted by the vibratory movements of gaseous water molecules.

**water vapor pressure deficit (WVPD):** difference between the water vapor pressures of two samples of air, one saturated with water and the other unsaturated, at a given temperature.

**wetting agent:** A substance, when added to water or liquid solution, which reduces the surface tension .of the soil so as to let the water penetrate.

**whorl:** Three or more leaves or flowers at one node; a radiation from a common level of the stem.

**wing:** A thin dry membranous expansion, extension, or appendage of an organ, as winged seeds or sepals.

**woolly:** Provided with long, soft, and more or less matted hairs; like wool.

## X

**x:** Indicates a hybrid, when used before the epithet of a specific name.

**xanth-:** Yellow.

**xanthobractea:** With yellow bracts.

**xenogamous;** fertilization of a flower from pollen from a flower on a genetically different plant

**xeric:** Pertaining to dry places; adapted to arid conditions. *xerographica:* Dry writing, referring to the delicate pastel coloration. *xerophyte:* A plant that survives under dry conditions.

**xerophyte:** a plant adapted to withstand drought.

**xiph-:** Referring to a sword.

**xiphifolia:** Iris-leaved; sword-like.

**xiphioides:** Sword-like.

**xylem:** the water-conducting tissue of plants.

## Z

**zebrina:** Striped rather regularly with white or yellow, like a zebra.

**zonata:** Zoned; banded with distinct colors.

**zygomorphic:** Divisible into two similar halves in one plane only; said of an irregular flower in which the parts are not alike. Not to be used to describe sepals or petals

**zygote:** the single cell resulting from the fusion of a sperm and an egg.